

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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Notes and Suggestions for the Month.

Capricornus (represented by the Rocky Mountain goat) is the "Zodiacal sign" for December. The labors of this month are confined, so far as concerns proper farm operations, chiefly to the barn and stock yards. There is, however, no lack of employment, for the old year's affairs should all be squared up and full preparations made for beginning the new year aright.

Accounts.—There is no more important task for a farmer or any other individual to set himself about, than learning exactly how he stands in his pecuniary relations to the world in general. All values which may be represented by dollars and cents should be included in taking the account of stock. Estimates should be made as low as can be done with fairness when in one's own favor, and when not favorable be put up to the highest figure they will bear. Whenever practicable, close up running accounts, pay debts, and if possible do henceforth a cash business.

Buildings.—Observe hints for previous months. Be tidy in all things, especially about the house and barns. During the winter study plans for improvements in buildings, or for new ones. In making plans for buildings it is well for several persons to draw them entirely independently of one another, after discussing the different requirements thoroughly together, so that each may know what is to be included in the plan.

Cattle.—Keep clean, use the brush or card frequently, shelter all kinds of neat stock. Keep no more than can be kept well, and be taken through in good order for work, for milking, or for growth; every pound lost must be regained before one gets much profit from his stock.

Cranberries.—Let water on whenever this is practicable and keep them submerged all winter.

Draining.—So long as the ground is not frozen

hard and is dry this work may be continued.

Farmers' Clubs.—Do not forego the benefits of a good club, if your own efforts will aid effectually in keeping one up in the neighborhood.

Fencing Stuff, etc.—Begin early and get out all that will be needed, and pile it up for seasoning.

Fodder.—See articles on the philosophy of feeding in the present number. Economize fodder of all kinds by cutting it up, soaking or cooking it in some way, and by sheltering the animals. Feed nothing on the ground, but have good racks, or at least some contrivance to keep it from being trampled upon and wasted.

Grain Fields.—Look to the surface draining before the ground freezes up hard, otherwise there may be serious damage done by washing during heavy rains or thaws. Wet soil heaves most in freezing. Keep cattle off and fences up.

Hogs.—See articles on slaughtering, page 338. Give hogs a chance to keep clean. Feed and shelter so as to keep them constantly growing.

Horses.—Look to the shoeing. Never drive a smooth shod horse in slippery weather. Keep horses of all ages well groomed, in light, well ventilated stables. Blanket whenever heated by work or standing exposed to drafts, not usually when standing in the stable. Too warm blanketing in the stable is a frequent cause of disease.

Ice.—The first thick ice is usually the best. It will pay to clear off the snow from spots on private ponds so that the pure ice, free from snow, may be obtained. Good ice may often be cut by Christmas time. Get it in on cold days.

Manure and Muck.—See article on page 336. Muck may be dug to advantage during the early winter and laid in heaps to freeze—moving it to solid ground while the swamp is frozen.

Poultry.—Look at the prices of eggs and chickens in our market tables, and see if it will not pay to provide a henry where fowls will lay in winter. See pages 335 and 337.

Roots.—Keep frost from root cellars by extra earthing up if necessary, and give additional protection to the pits—preserving ventilation.

Sheep.—The keeping of sheep—especially fine wool sheep—has become almost a mania in some parts of this country. Take notice that the coarse grades of wool bring, proportionally, far higher prices—in some cases absolutely higher than fine wool, and that neither wool nor mutton brings prices proportionate to the rise in price of gold. There is great profit in sheep raising, and the American Merinos are excellent. So are South-downs and the Long-wools where the circumstances are adapted to them. Feed under good warm sheds, in racks, and let the sheep do their own cutting up of the fodder and grinding the corn. See that water is always accessible, and keep salt before them.

Tools.—Look out early for new implements of the best kind, and keep all in good repair.

Wood.—The early winter should see work laid out in the wood lot, to fill the time when nothing else is on hand. Timber may be cut and sledged, or that hewn and hauled in which was best cut early in the autumn and seasoned.

Work in the Orchard and Nursery.

Out door work is confined to a few operations and the horticultural calendar is of necessity brief. The nurseryman can now be preparing for his spring sales. Trees temporarily heeled in should have their roots well covered. Those who intend purchasing trees for planting in spring should send orders early, as in all well regulated establishments they are filled in rotation, and the earliest orders are soonest put up.

Cions.—Cut during mild weather, handle carefully, and preserve in damp sand or earth.

Fruit.—Late sorts are to be kept as cool as possible. Remove to the cellar only when there is danger of freezing. Look over specimens ripening in the fruit room, and remove those coming in eating to a warm room to ripen up.

Cutting Back.—Young nursery stock will need to be cut back and brought into shape. See p. 345.

Manure and Mulch.—The manuring of trees may be done any time up to early spring. Give a good coat of coarse manure as far out as the branches extend. It has been suggested that peach trees may be kept back late enough to avoid spring frosts, by giving a heavy mulch on the roots after the ground is well frozen.

Mice and Rabbits.—These often destroy young trees, especially when there is a light snow for them to work under. Tramp the snow firmly about the trunks. Shields of tin or sheet iron, stiff paper, or cloth, have been recommended. It is said that rubbing with fat pork, or any other animal fat, will prevent rabbits from gnawing the bark. Traps and shot guns are helps.

Preparing the Soil.—Drain where needed, whenever the weather allows. Plow deeply. Make holes for trees in prepared soil deeply worked.

Root Grafting.—This can be done in-doors. See page 344; and also page 20 (last January).

Work in the Kitchen Garden.

The clearing up should have been done before, but if there are still rubbish, poles, stakes, or anything in the garden that interferes with its neat look, put it in its place. In mild weather plow deep and expose the soil to the action of frost. Ridge stiff soils as directed last month.

Asparagus.—If the beds have not been already covered, give a thick blanket of stable manure.

Celery.—Harvest any remaining out, as directed in Oct. Calendar, or cover the trenches well.

Cold Frames.—Give as much air as possible on mild days, and cover the sash with mats or shutters at night. Keep the mice out.

Compost.—The heaps should increase rapidly

during winter. Have muck at hand to absorb the liquid in the privy, barn-yard and piggery. Coal ashes are advantageously added to stiff soils.

Hot-beds.—The repairing of frames, glazing of sash and the building of new ones give employment for rainy days.

Parsnips and Salsify.—Dry for use whenever the ground is open, and use that in the cellars in bad weather.

Rhubarb.—Heavy manuring is the secret of heavy stalks. Put on plenty of manure if not done already.

Seeds.—See that everything is properly put up. Seeds will "mix" in the seed box, especially if there are holes in the papers. Put name and date on every parcel and throw away everything about which there is any doubt. Exchange with neighbors and distribute liberally any good or new variety through your Farmers' Club.

Tools.—Do not wait until they are wanted before putting in order. Take to the blacksmiths all that can be repaired by him. Do the wood-work yourself. Oil or paint all wooden parts. Mark everything with your name or initials. Give iron or steel, which is to have a long rest, a coat of beeswax and lard to prevent rusting. If there is no tool-house, build one, or partition off a place in the barn or shed, and have a place for every thing.

Flower Garden and Lawn.—But little needs to be added now to the directions given last month. Protect all tender plants. After a fall of snow, see that evergreens and dense clumps of shrubbery are not injured. Top-dress lawns, make walks and lay out borders whenever the weather will allow. All plants in frames and pits need air on mild days, and careful covering with mats or shutters during cold days and nights.

Green and Hot-Houses.—The directions last month for temperature, moisture and ventilation, apply during the variable weather of the present month. On damp and foggy days, fire should be put in the green-house, even if the temperature is not too low.

Bulbs brought from the green-house to a warmer apartment, a few pots at a time, will keep up a succession of bloom. Syringe the foliage of Camellias and other thick-leaved plants. Continue the fight against insects as directed for house plants on page 346. Start cuttings, and stimulate lagging plants with weak liquid manure.

Cold Grapery.—Prune vines and prepare them for their winter sleep. Chorlton, in his Grape Grower's Guide, recommends covering the canes with the following mixture, to destroy larvae and eggs of insects: Whale-oil soap $\frac{1}{2}$ lb., sulphur 4 lbs., tobacco $\frac{1}{2}$ lb., powdered nux vomica 1 oz. Pour over these 1 gallon of boiling water and stir well together, and apply with a paint brush. To lay the vines down, tie it to the wire at about two feet from the ground, and then bend the portion above this point to a horizontal position and cover about three inches thick with straw and tie it on, or put up boards in front of the vines and cover with forest leaves. Keep the house cool by opening ventilators on clear days; close at night, and on cloudy and severe ones.

Fruit Garden.—Most things will be benefited by a good coat of manure. Currants and gooseberries may be pruned by cutting out the old wood where crowded, and shortening the last season's growth. Bury the new wood for cuttings. Prune grape vines, leaving one or two buds more than are needed, to be removed next spring. Vines are trained on so many different plans that no precise directions can be given. If the wood is needed for propagating, save only the well-ripened, and preserve in a moist cellar or bury in a dry place in the open ground. Every one who owns a vine or many, should read that plain and practical work, Fuller's Grape Culturist. Give strawberry beds a covering of straw, leaves, or other protecting material.

Apiary in December.—Prepared by M. Quinby.—Bees to be housed in winter, should have the advantage of flying out the last warm days that occur. To make the confinement as short as possible, leave them until winter approaches in earnest. They are much more quiet in handling, when the weather is a little sharp, than on warm days. The room in which they are stored, should be perfectly dark, and dry as possible. Fifty-stocks or more, are necessary in a room above ground, to secure a temperature sufficiently high. Over one hundred would make it too warm part of the time. A few may be kept comfortable in a dry warm cellar. As there is always moisture generated in a hive of bees, some means must be provided to get rid of it. The box hive should be turned bottom upward, when sufficient ventilation can not be obtained otherwise. The honey board of the movable comb hive may be raised a little, or some of the holes—passages to the surplus boxes—may be opened. Bees consume less honey when protected and kept warm, than when exposed to the inclemency of the weather. A very few bees will perish when the temperature is at the freezing point, but in a full colony they warm each other and sustain life in a much colder atmosphere. A

number of colonies together warm each other on the same principle. Feeble stocks that would perish in the open air, are so much benefited by the warmth given out by the stronger ones, as to pass the winter safely. Only strong stocks will do well in simple wooden hives in the open air. If the moisture passes out through any special vents, it will carry with it much of the warmth, which a feeble colony can not afford to spare. Hives of straw may yet be made, early in this month, to be used the coming winter by those having the movable combs. When transferring the contents from wooden hives to those of straw in cold weather, take them to some room nearly dark, where they will fly much less. Wood hives are greatly benefited by surrounding with a good thickness of straw. If the fly holes are large enough for the mice to enter, nail wire cloth over them, but leave a passage for the bees. Bees may be buried in some places, safely. A very few may be entirely covered with earth, first surrounding the hives with a thick coating of straw. A large number would need the admission of air. The light must be excluded, as well as mice and moisture.

Twenty Good Premiums For Volume 24.--1865.

We can not employ traveling or local Agents to solicit subscriptions, as is done by most other journals. There is no margin of profit out of which to pay commissions. The (new) terms are arranged to just meet the present cost of supplying the paper. We hope "in the good time coming" to make a reasonable profit; but while waiting for better times, our chief aim is to maintain and increase the present circulation. Even this will require some effort, for at the usual rate of mortality, 3000 or more out of every 100,000 die annually; while many thousands of our subscribers have volunteered in the service of the country. The enterprising men who take and read journals of this kind are foremost in every good work. We met many readers in the camps in Virginia, and we hear of and from them in almost every part of the country where the Union armies have penetrated.

We shall be glad to send the *Agriculturist* into many new families, believing that its mission will be useful. All who aid in this will do a good work.

To those who take time to collect clubs of subscribers, we offer below as premiums, some good articles purchased with funds derived from other resources than subscription money, for that will all be required in supplying the paper, unless printing paper and labor decline materially.—We invite every subscriber, everywhere, to make an effort to obtain one of the good articles offered as premiums. They are all worth securing.

Send along the names as fast as obtained, that the subscribers may begin to receive their papers promptly. When any list is completed notify us which of the articles is desired, and it will be promptly forwarded. To save mistakes and the keeping of money accounts, send with each name or list of names the exact subscription money.

To avoid errors and save immense labor in looking over our books, it is absolutely essential that every name designed for a premium list be so marked when sent in. (Such names will be credited the sender in a separate book, as fast as received—ready for instant reference.)

Old and new subscribers will count in premium lists, but they should be partly new names, for it is to obtain such that the premiums are in part offered. Premium clubs need not all be at one Post office. Of course only one premium will be given for the same subscriber.

Table of Premiums and Terms. For Volume 24.

Open to all—No Competition.

Names of Premium Articles.

Names of Premium Articles.	Price of Premium.	Names at \$1.00 each.	Names at \$1.50 each.
1—Good Books.—See terms below.
2—Case of Drawing Instruments.	\$8.00	14	60
3—Best Family Clothes-Wringer.	\$10.00	17	70
4—Doty's Washing Machine.	\$12.00	19	80
5—Sewing Machine, (Wheeler & Wilson).	\$35.00	70	360
6—Four Octave Melodeon (best).	\$67.00	80	400
7—Five Octave Melodeon (best).	\$112.00	140	600
8—Brown's Baby Tender.	\$30.00	37	190
9—Brown's Baby Tender.	\$42.00	52	226
10—Woodruff's Mercurial Barometer.	\$10.00	17	70
11—Woodruff's Mercurial Barometer.	\$15.00	21	90
12—The Aquarius.	\$12.00	18	80
13—Ladies' Rosewood Writing Desk.	\$12.00	18	80
14—Gentleman's do do do.	\$14.00	21	90
15—Any back Volume <i>Agriculturist</i> .	\$1.50	20	20
16—Any Two do do do do.	\$3.00	25	25
17—Any Three do do do do.	\$4.50	30	30
18—Any Four do do do do.	\$6.00	11	40
19—Any Five do do do do.	\$7.50	13	50
20—Strawberry Plants.—See Terms below.

No charge is made for packing or boxing any of the articles in this Premium List. The Books, also Premiums 2, 15, 16, 17, 18, 19 and 20, are DELIVERED to any part of the United States and Territories, free of all charges. The other articles cost the recipient only the freight after leaving the manufactory of each. Every article offered is new and of the very best manufacture.

NOTES ON THE PREMIUMS.

Premium 1.—Good Books.—Any person sending a club of 25 or more subscribers, may select Books from the list on page 333, to the amount of 10 cents for each subscriber sent at \$1; or to the amount of 60 cents for each name at \$1 50. This offer extends only to clubs of 25 or more names. The Books will be sent by mail or express, prepaid by us.—This is a good way for the farmers of a neighborhood to get up an Agricultural Library for general use. Several Farmers' Clubs have done so.

Premium 2.—The Case of Drawing Instruments is a Rosewood Box, containing a dozen very excellent articles, of polished steel and brass—useful for sketching, drawing, plotting, laying out plans of land, buildings, etc. There are dividers with joints, points, markers, pencil holders, ruling pens, semicircles, etc., etc. Each piece is fitted into a velvet cushion. These instruments were part of those ordered from Paris for last year's premiums, which arrived too late. They could hardly be imported now for double the money. While useful to all, nothing better could be given to children to develop their tact, taste, and mechanical skill.

Premium 3.—The Clothes-Wringer is too well known to need description. No better or more useful labor-saving and clothes-saving implement has ever been introduced into the household. We give only the "Universal Clothes-Wringer," fitted with cogs, which we esteem essential to any good wringer. The one we offer (No. 2) is of the right size for general family use. It is a good Christmas or New-Year's present for your care-worn wife.

Premium 4.—Doty's Washing Machine we have tried thoroughly for nearly a year past, in competition with many others sent to us, and for actual service this seems to be an improvement upon every previous machine we have tested. It is compact, and easily and naturally worked. Our "better half," who has been complimented with the gift of a score or more of different machines for trial, says this is taken to most kindly by the "help," and that she can not persuade them to use any other while this is at hand. The machines sent to those entitled to them as premiums will be forwarded from Janesville, Wis., to those living in Ohio and further west; and from the manufacturers' New York Warehouse to those living east of Ohio. Send to Messrs. Doty Brothers, Janesville, Wis., for a descriptive circular, which will be supplied free.

Premium 5.—Woman's Greatest Boon. We would advise a man to forego a threshing, and thresh wheat with a flail, rather than to see the wife wear her health, vigor, and life away, in the everlasting "stitch, stitch, stitch," when a Sewing Machine can be obtained. The Wheeler & Wilson, or some other good machine, is an invaluable aid in every household. We have had several different machines on trial, and after six years' service the Wheeler & Wilson has taken precedence as the best machine for all kinds of sewing to be done in the family. A large number of persons have in the past years secured one of these premium machines as Christmas or New Year's presents for the home circle.

Premiums 6 and 7.—We have had one of Geo. Prince & Co.'s large Melodeons in our Sunday School room for five years, where it has given the highest satisfaction, and in all this time it has not had the slightest repair or tuning. We can recommend this instrument very highly. Send a P. O. stamp to Geo. A. Prince & Co., Buffalo, N. Y., and get an illustrated descriptive catalogue, giving sizes, prices, etc. The Premium Melodeons will be forwarded direct from the manufactory ready boxed, by railroad, steamboat or express, as directed by the recipient. It is very easy for the members of a Congregation to make up a club of subscribers to the *Agriculturist*, and get one of these Melodeons for the Church or Sunday School room. Many churches have done so since we first offered this premium.

Premium 8 and 9.—The Baby Tender happens to be so well described on page 347, that we need add nothing further here. We select two styles that will meet the wants of the larger class. More costly ones, in a higher style of finish (though not more effective,) will be supplied for a proportionably greater number of names.

Premiums 10 and 11.—Woodruff's Mercurial Barometers. These are the best instruments we know of for the price. Send to the manufacturer, Charles Wilder, Peterboro, New Hampshire, for a circular giving engravings and a full description of the instruments. They are so portable that the manufacturer will warrant the safe delivery to the recipients of every instrument given by us as a premium. If not to be sent beyond the Rocky Mountains. We offer two forms, both of which are effective and accurate, differing mainly in the style of case. Both have a thermometer and vernier. The \$15 instrument is of course the most desirable, though either one of them will be highly useful. The barometer, as a weather indicator, is almost as valuable to the landsman as to the mariner. There are many times in a year when the warning of a barometer will save more than its cost, while the annual interest on the price will be only 75 cents or \$1 a year. The habit of observation, and of scientific study, cultivated in children, will repay the cost of such implements. A little effort will secure a premium one.

Premium 12.—The Aquarius, or Water-Thrower, is an excellent portable force-pump, useful in many ways—to water the garden or plants, to wash windows, carriages, etc. One can catch up the implement, carry it to any place, and from a pail throw a considerable stream of water 20 to 30 feet or more, and thus sometimes put out an incipient fire that could not be readily reached otherwise. It has a jet-pipe, and also a rose, or sprinkler. An air-chamber attached keeps up a steady stream. Send to W. & B. Douglas, Middletown, Conn., and get a circular giving full particulars.

Premiums 13 and 14.—These are very neat, portable Rosewood Writing Desks, which can be closed up and locked when not in use. When closed, No. 13 is 12 inches long, 9 inches wide, and 4 inches high, and will hold ordinary letter paper. No. 14 is just like No. 13, but larger, and will hold foolscap paper. They are both of fine rosewood, finished with brass corners and mountings. No. 13 is a fine present for a teacher or other lady, and either one is convenient for any person both to use as a writing desk on the table or even on

the lap, and to keep documents, paper, pens, ink, etc., safely and always conveniently at hand when wanted.

Premiums 15 to 19.—Each volume of the *Agriculturist* is, in a certain sense, a Cyclopaedia of information for the Farm, Garden and Household. Any volume, from 16 to 23 inclusive, can be supplied in neat new numbers, freshly printed from stereotype plates, with Index and Title page complete. They are necessarily sent post-paid. If desired bound, they will cost \$1 per volume extra for the binding and additional postage. A few of these volumes will make a good addition to any one's store of reading matter, valuable for reference on every topic connected with rural life.

Premium 20.—The "*Agriculturist Strawberry Plants*."—Any person sending a club of 25 or more subscribers will be presented with one dozen of these plants, if applying before our stock is exhausted. We reserved only 40,000 plants for distribution, a part of which have already been called for. These will be sent out early in spring, free of expense to premium takers. Independent of the above, any subscriber may call for a plant, if he send 5 cents for expense of packing and postage—but only on condition that the application comes with the subscription, to save looking up the name.

Commercial Notes—Prices Current.

The following condensed, comprehensive tables, carefully prepared specially for the *American Agriculturist*, show at a glance the transactions for a month ending November 16, with other interesting comparative figures.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats.
27 days this m'th. 481,000 1,287,000 988,000 239,000 861,000 2,534,000
26 days last m'th. 339,000 1,313,000 1,190,000 187,000 321,000 1,925,000

SALES. Flour, Wheat, Corn, Rye, Barley, Oats.
27 days this month. 458,000 1,411,000 1,132,000 174,500 613,000
26 days last month. 278,000 1,365,000 1,437,500 94,000 118,000

2. Comparison with same period at this time last year.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats.
27 days 1864. 481,000 1,287,000 988,000 239,000 861,000 2,534,000
27 days 1863. 530,000 3,034,000 531,000 21,000 607,000 2,102,000

SALES. Flour, Wheat, Corn, Rye, Barley, Oats.
27 days 1864. 458,000 1,411,000 1,132,000 174,500 613,000
27 days 1863. 499,000 3,113,000 3,013,000 26,000 588,000

3. Exports from New-York, January 1 to November 16.

Flour, Wheat, Corn, Rye, Barley, Oats.
1864. 1,764,342 11,982,576 814,608 453 39,643
1863. 2,278,335 14,199,328 7,486,835 415,249 123,996
1862. 2,083,086 23,216,817 10,542,556 1,888,790 144,165

4. Receipts of Breadstuffs at Albany, by the New-York Canals from the opening of navigation to Nov. 7th.

Flour, Wheat, Corn, Rye, Barley, Oats.
1864. 970,400 13,415,000 9,635,000 525,500 2,078,700 9,440,000
1863. 1,142,100 14,414,000 20,405,000 335,500 1,866,400 8,582,900
1862. 1,311,300 27,574,800 19,391,300 737,400 1,438,100 4,449,000

CURRENT WHOLESALE PRICES.

	Oct. 15.	Nov. 16.
Flour—Super to Extra State	\$8 00	\$9 30
Super to Extra Southern	10 50	10 40
Extra Western	9 75	9 90
Extra Genesee	9 15	9 10
Superfine Western	8 00	8 50
RYE FLOUR	8 25	8 25
CORN MEAL	7 65	7 50
WHEAT—All kinds of White	2 10	2 40
All kinds of Red	1 81	2 12
CORN—Yellow	1 55	1 56
Mixed	1 52	1 54
OATS—Western	85	86
RYE	1 30	1 40
BARLEY	1 67	1 95
COTTON—Middlings, per lb.	1 10	1 15
Hops, crop of 1863, per lb.	15	35
Hops, crop of 1864, per lb.	38	50
FEATHERS, Live geese, p. lb.	72½	75
SEED—Clover, per lb.	Nominal.	19
Timothy, per bushel	5 00	6 00
FLAX, per bushel	3 00	3 10
SUGAR—Brown, per lb.	17	21
MOLASSES, New Orleans, p. lb.	50	1 10
COFFEE, Rio, per lb.	36	39½
TOBACCO—Kentucky, &c, p. lb.	12½	40
Seed Leaf, per lb.	25	65
WOOL—Domestic fleece, p. lb.	80	87½
Domestic, pulled, per lb.	65	80
California, unwashed	25	60
TALLOW, per lb.	15½	17
OIL CAKE, per ton	75 00	82 50
PORK—Mess, per bbl.	43 00	43 00
Prime, per bbl.	39 00	40 00
BEEF—Plain mess	13 00	17 00
LARD, in bbls, per lb.	20	22
BUTTER—Western, per lb.	38	35
State, per lb.	36	45
CHEESE	12	21
BEANS—per bushel	1 50	2 55
PEAS—Canada, per bushel	2 00	2 00
EGGS—Fresh, per dozen	28	29
POULTRY—Fowls, per lb.	16	17
Turkeys, per lb.	50	1 00
Spring Chickens, per pair	3 00	3 50
POTATOES—Mercers, p. bbl.	3 00	3 50
Peach Blow, per bbl.	2 75	3 00
Dykemans, per bbl.	2 50	3 00
APPLES—Raidwines, per bbl.	2 75	3 00
Apples—Fall Pippins, per bbl.	2 00	1 75
Apples—Common per bbl.	2 00	3 00
CHERRY—per bbl.	12 00	15 00
QUINCES, per bbl.	3 00	6 00

Owing to the rise in gold, domestic produce improved during the past month. Breadstuffs were more in demand with very light receipts, and prices went up, but now tend downward. Our tables above, carefully prepared from official and other reliable sources, indicate the absolute and comparative magnitude of the business of the month—receipts, sales and exports—to November 16. Provisions have been very animated. Receipts

and sales of hog products have been very large, but at quite variable prices, closing in favor of buyers. The demand for Beef, Butter, and Cheese, has been quite brisk, at high rates. Domestic wool has advanced considerably, and prices still tend upward, partly because holders anticipate further improvement. Hay and hops have been in fair demand at steady prices. Hemp and Seeds, quiet. Tobacco, active and stiffly held.

New York Live Stock Markets.

BEEF CATTLE.—The weekly receipts for 5 weeks past, average 6,555. With plenty of common cattle, there has been a lack of choice heaves. Prices have fluctuated. Monday, Nov. 14, demand active, rates advanced. Good bullocks sold at 16@18 cts. per lb., for estimated dressed weight; medium, 12½@15½ cts.; poor grades, 9@12 cts.

MILK COWS.—Average arrivals per week, 112. The demand is not very active; but first-rate milkers command high prices—good stock, from \$60 to \$75; choice, \$80 and over; ordinary and fair, \$30 to \$50.

CALVES.—Receipts average 1,767 per week. Good veals are worth 12@13 cts. per lb. live weight; fair, 10@11 cts. The supply is lighter than last month.

SHEEP.—Weekly average, 21,662. Prices of good sheep, 8@8½ cts. per lb. live weight; select 9 cts.; medium, 7@7½ cts.; light sheep, about \$4 to \$6 per head. Lambs sell at \$4.50@\$6 each; 10 cts. per lb. for best.

LIVE HOGS.—Supply per week, 23,241; or nearly 10,000 above last month. Prices vary from 11@12½ cts. per lb., live; or 14@15½ cts. per lb. for dressed.



Containing a great variety of items, including many good hints and suggestions which we throw into small type and condensed form, for want of space elsewhere.

Many Good Articles and Items, ready in type, and in manuscript, are crowded over to the next number, by the Index and various business items necessary to be inserted in this closing paper of the volume.

To use the Index and Title Page.—In binding or stitching the numbers together, cut this number open, loosen the thread at the back, take the two outside leaves, and place them at the beginning of the volume. We bind volumes left at the office, for 75 cents.

Complete Volumes of the Agriculturist on Hand.—We can supply any volume, from 16 to 23 inclusive, mostly newly printed from stereotype plates. Price at the Office, \$1.25 each in numbers; or \$2.00 neatly bound in our regular style. If to go by mail, add for the postage which must be pre-paid: 24 cents per volume for the unbound, and 44 cents for the bound.

To Correspondents.—Several letters from our readers remain as yet unattended to, simply because the days are only 24 hours long, and because the paper-makers' prices, and the demand for a low-priced journal, limit our space to 32 pages.—The Publisher has regained nearly his former strength and vigor, and all his lost flesh, and more too, and is rapidly bringing up arrears in business matters requiring his personal attention.

Over Two Thousand Items.—The editor in charge of the Index, reports over 2,000 separate articles and items contained in this single volume. Has any reader failed to derive more than one hint, or suggestion, or train of thought, that has been, or will in the end be worth a dollar? Would any one part with all he has learned, or thought of, while reading the *Agriculturist* since last December, and receive a dollar instead? The Irishman who said "one man was as good as another; faith, an a little better," said just what we think about the next volume. (Mem. The next volume, with its thousands of articles, items, engravings, etc., etc., will cost only \$1.50, or less to clubs of subscribers.)

About Books.—On page 353 will be found a list of such books as we can now supply, on subjects relating to the farm, garden and household. Many of the books are out of print, and only a limited supply remains. New editions will not be issued until paper and labor materially decline, so that those wanting any of these books will do well to supply themselves at an early day.

Important to Advertisers.—Distant parties, or others unknown to the Publisher personally or by good repute, who may wish to use the business columns of the *Agriculturist*, must satisfy us with respect to their integrity. We can not go into every man's establishment and examine his wares and prices, but un-

less we have reason to believe that a dealer will treat his customers well, and that goods selected or ordered, and paid for, will be delivered as promised, in kind, quality, and price, we can not consent to the use of these columns as a guide-board to his establishment for our hundred thousand subscribers. No patent medicines, secret remedies, or other such things, are advertised on any terms.—At the special desire of many advertisers, we as usual request those ordering, or sending for circulars, etc., to state where the advertisements were seen.

Petroleum Humbugs.—To avoid the possibility of leading our readers astray, we have declined large sums offered for advertisements by petroleum companies, some of them apparently got up in good faith. The chance success of some stock companies—not a dozen in all—is leading to the formation of hundreds of others, with an aggregate capital reported at \$160,000,000. Of these probably nine-tenths will turn out failures or frauds. We incline to Cuffee's advice in Cholera times: "Eat nossing at all, and den you no 'spose yourself."

Papers for Wounded Soldiers.—A liberal hearted business man of this city, after renewing his own subscription the other day, laid down a twenty dollar bill, saying: "Send twenty more to soldiers' hospitals of your own selection, that wounded men may have something besides 'trash' to read." This is worthy of imitation. A large number of our soldiers are farmers, and in our labors among the wounded men in Virginia, we seldom found more acceptable gifts than copies of this journal. Now and then some one who had been at the Office would recognize us, and pass our name along, so that we received many a welcome from former readers. In one case there were seven of our old subscribers in a tent of thirty men. We are distributing a good many thousands of copies to the hospitals this year on our own account, and will be happy to have the co-operation of others, as in the instance above-named. Such subscriptions will be very willingly supplied at cost or less.

The Wheeler & Wilson Establishment.—A very pleasantly written account of this appears on page 351. Every one coming to New York City should visit this "palace of industry," which all are freely invited to do, without regard to their being customers. The ceiling and wall paintings there give one some idea of the manner of adorning the finest public buildings, churches, art galleries, hotels, etc., in Europe.

Portraits of Our Successful Military Heroes will be in demand among their thousands of admirers. We have examined those advertised in our columns by C. B. Richardson. They are beautifully executed on steel, and will be ornamental in any dwelling.

The Latest Fruit-picker.—We thought that we had described all the fruit-picking contrivances, but here is an entirely new one by E. L. Nichols. It is made from a common bottle gourd, in the larger end of which is cut a hole large enough to receive the fruit. The smaller or stem end is cut off to admit a wooden handle, which has a shoulder to make a snug fit to the gourd, as in the sketch. The part of the handle entering the gourd has a hole through it, or a groove, and melted lead is poured in to fasten the handle.

A Hearty Laugh is a luxury—and often is a first-rate medicine. We indulged in such a laugh the other evening, while the young folks were amusing themselves with an innocent and very comical game, advertised on another page, under the fanciful head, "The most Laughable Thing on Earth." It is not a humbug.

"Our Farm of Four Acres."—This pleasant and instructive volume is worth procuring and reading by every person in the country or city. It has been out of print lately, as its former publishers have gone out of the book business. To meet the want for it, we have procured the publishing of a new edition, which is now just ready. The price, post-paid, is only 30 cents per copy in neat paper covers; or 60 cents if full bound.

"Tobacco Culture"—"Onion Culture."—The best information on these subjects which can anywhere be found, is given in two little works, containing the plain, practical directions of a large number of cultivators of long experience, and residing in different parts of the country.—Price, post-paid, for "Tobacco Culture," 25 cents; and for "Onion Culture," 20 cents.

The Yeddo Grape.—Several persons have asked about this variety, concerning which there were such great expectations. The vines of Messrs. Parsons, of Flushing, L. I., did not fruit this year. Those belonging to Dr. Hall, who first introduced the vines into this country, made a show of fruiting, but being in an unfavorable situation did not perfect their fruit. Mr. Saunders, of the U. S. Propagating Gardens at Washington, exhibited a specimen at the meeting of the Pomological Society, at Rochester, Sept. 13th. The bunch was long and loose, with berries about the size of a large Delaware. At that time they were just beginning to color, and no opinion could be formed of their quality. Mr. S., we believe, is pleased with the growth of the vine, and considers that it is a variety of much promise. Doubtless some years of trial will be required to fully determine the actual merits of the Yeddo.

The Pomological Society's Proceedings.—"F. A. S.," St. Louis, Mo. It is impossible to publish these in detail as they would occupy the whole paper. All interested in Pomology should become members of this society, which they can do by sending \$2 to the Treasurer, Thomas P. James, of Philadelphia. Membership entitles one to a copy of the transactions.

Grapes in a Poultry House.—"W. K. D.," North Reading, Mass., having built a poultry house with walls of sids and a glazed roof, asks if he could not grow Black Hamburgh grapes in it. Undoubtedly if he will only take sufficient pains. His roof is 9 feet long, and would accommodate two vines. The border must be prepared before winter. The roof should not be at a less angle than 45°, and provision is to be made for ventilation above and below. By taking Chorlton's Grape Growers' Guide, and following its suggestions, we can conceive that much interesting amusement and some good fruit may be realized from such a structure. Of course the poultry must go out when the vines start.

Osters for a Grape Trellis.—W. B. Waldo has an abundance of oster willow of rank growth, and wishes to know if he cannot use it instead of wire in making a trellis on Mr. Fuller's plan. (August *Agriculturist*, 1863, p. 244.) The idea seems so feasible that it is certainly worth trying, and we have little doubt of its success. The osiers would be rendered more durable by soaking in a solution of blue vitriol, or by covering them with thin coal tar. We shall feel much interest in the results of this experiment when made, and hope Mr. Waldo will communicate them for the benefit of others.

A Long Vine.—C. A. W. Warner, Mahoning Co., O., sends us the measurement of a volunteer citron-melon vine which came up in his garden. The total length of the main vine and branches was 381 feet, and it produced a little over 41 lbs. of fruit. Mr. Warner gives a very complete and interesting measurement of all the different parts of the vine, for which we have not room.

Propagating Grapes.—T. Wheeler and others. The Delaware does not propagate readily in the open air. If disposed to give a trial, make the cuttings of two eyes at once, and bury them for the winter below reach of frequent freezing and thawing, and set out in a moist place when the ground is warm. A portion will grow, with good management. The Iona and especially the Concord grow readily in open air. See Calendar.

A Winter Pear Wanted.—Dr. W. Camp, Hartford Co., Conn. Try the Lawrence, described on page 345. The varieties mentioned have not been very extensively cultivated. The Josephine de Malines has to be quite old before it bears well. The Belle Williams is a very large winter pear, which promises well.

Hardy Apples for the North and Northwest.—Frequent inquiries are made as to what varieties are hardy in the colder portions of the Western States. Many live far from nurseries, and are in the main obliged to buy of traveling agents, who have very little knowledge of varieties, and can not often be relied upon to furnish trees of the kind they contract to deliver. The following list of varieties is furnished to the *American Agriculturist* at our request, by a gentleman who has tested them in Northern Illinois, in about the latitude of Chicago. This list includes none but what were perfectly hardy there. As far as the reports of the Pomological Society and other statistics go, a good portion of these have been found to succeed in Iowa, Wisconsin and Minnesota. Lists of those known to be hardy in those States are desired. Our correspondent found the R. I. Greening, Baldwin and Northern Spy very long in coming into bearing and not satisfactory. His advice is to try these three varieties sparingly, if at all, and to reject the Esopus Spitzenberg altogether. **SUMMER.**—American Summer Pearmain, Carolina Red

June, Early Harvest, Golden Sweeting, productive and usually fair; Keswick (English) Codlin, very early bearer, productive, has good flavor for cooking before August. It is ripe and fair for eating about the last of September; one of the very best for cooking; sells high; profitable. Williams' Favorite, productive, early.

AUTUMN.—Drap d'Or; Paragon (Downing's) Sweet; Dutches of Oldenburg, fine looking, early, constant and abundant bearer, some esteem it for eating, but better for cooking; Hawthornden, dwarfish, early bearer, very productive, of good size and almost uniformly fair, very acid; for cooking or drying; if not well fed or the fruit thinned, it may soon fail from overbearing; may be planted very closely; profitable for market because so fair; Jersey Sweeting; Late Strawberry; Lyscom.

WINTER.—Belmont; Campfield, sweet, for cider, productive; Danvers Winter Sweet; Golden Russet of Western New York, bears early, productive; Fameuse; Snow Apple, (Pomme de Neige,) excellent when well developed, bears abundantly, and needs rich soil and good culture; Ladies Sweeting, productive, very good; Limber Twig, small, good flavor, keeps well.—Monmouth Pippin; Mother, superior; of Spitzenberg family; Ramsdell's Sweet, very productive; Rawle's Janet, late keeping, flowers late; Talman's Sweeting; Westfield Seek-no-further; White Bellflower, very hardy and productive; Willow Twig, long keeper; Winesap, small, but early bearing, productive and very long keeping, has been kept past the 4th of July, sound, and with well-preserved flavor, must be well manured and cultivated; Yellow Bellflower, not productive.

Replanting Old Orchards.—"J. F. S." asks if it would do to plant young trees in the places where old ones have died and decayed. We should prefer to cultivate a few years with well-manured crops, using lime or ashes, before setting new trees. Better give up the old orchard and start anew on fresh land.

Seeds for Fruit Stocks.—O. Moffat and others. All the large dealers sell seeds of those raised in this manner. Dwarfing stocks for apple and pear are raised from stools, and not from seed. They may be had of the larger nursery establishments and importers. See advertisement of C. Raoux, in the present number.

Peaches and Small Fruits in Delaware.—A correspondent at Frederica, Del., writes that from 2,600 peach trees, 4 years old, he marketed and canned 5,000 baskets, fed 500 baskets to hogs, and that about 500 went to waste for want of facilities for getting them to market. Strawberries do well, and for the past three years he has annually marketed 7,000 to 9,000 quarts. Grapes do not succeed with him.

Roses from Seed.—A. E. Rouse, Woodford County, Ill. The seed is kept in sand through the winter and sowed in pots or boxes in spring. The young plants are potted as soon as they have made three or four leaves beyond the seed leaves. After they have grown in small pots for about a month they are put out in a nicely prepared bed. It is hardly worth while for amateurs to take this method to procure plants, as perhaps not more than one seedling in a thousand will be worth growing. Good established sorts are easily raised from cuttings.

Protecting Strawberry Beds.—M. S. F., Ludlow, O., lays cornstalks parallel with the rows, and then spreads over them a covering of leaves. In the spring the stalks are removed, and the leaves are left as a mulch, and to keep the fruit from being soiled. In protecting with any material, the crowns of the plants should be lightly covered. The main object is to keep the soil around the roots from sudden thawing and freezing.

Drying Kiln Wanted.—We have several inquiries for the best kiln for drying fruit. Will those having such in operation send us drawings and descriptions?

The Iona Grape.—B. H. Eldridge, Tippecanoe Co., Indiana. The Iona is of a fine wine color, something like the Catawba, and with a beautiful bloom. Allen's Hybrid is the best white variety that has been thoroughly tested, though it mildews in some localities.

Strawberry Query—Fruiting under Glass.—To several inquirers. The "Agriculturist Strawberry" is a "perfect" plant, bearing both stamens and pistils, and needs no other variety near it.—Last winter we built a bed inside the green-house, and set out fifty plants. These appeared green and vigorous and the crowns increased somewhat, but no runners were started. In February the heat was increased, and the plants were in full bloom for several weeks, but no fruit set. We began to fear there had been some mistake about the plants being perfect ones, especially as upon a casual glance no stamens were visible. A closer

examination with a magnifying glass proved the presence of minute undeveloped stamens. This fact, together with the full fruiting at the usual season of all the plants in the open ground where 1½ acres were grown, with no others near, proved that the influence of the glass, or of the confined unnaturally warmed air prevented the full development of the stamens. Have others noted this phenomenon with strawberry plants growing under glass?

The Sheldon Pear.—M. H. Smith, of Wayne Co., N. Y., states that we gave the wrong town as the place where this originated. He states that there are two trees on the farm of Norman Sheldon in Huron, Wayne Co., N. Y., from which he ate fruit 32 years ago.

Surface Manuring of Pear Trees.—G. W. J. Kellogg, Rock Co., Ill. Coarse manure applied in the spring, at the time the rains come on, wastes but little. The soluble matters are washed into the soil, and the litter that remains is an excellent mulch.

Knotty Pears.—S. Balsiger, Madison Co., Ill., complains that his pears or quinces grow knotty. Try surface manuring and a free thinning of the fruit.

Wormy Apples and Manuring Orchards.—"A. M. D.," Waterville, Me. If one particular variety always has its fruit attacked you must either contrive to trap the moths before they lay their eggs, or graft the tree over with some fruit which they are not so partial to. There is no remedy after the egg is laid. In winter or early spring spread a good coating of coarse manure around the tree as far as the roots extend; a little heaped around the trunk does no good. The feeding roots go about as far as the branches.

Evergreens from Seed.—T. Welsh, of Athens Co., O., finds that his seedling evergreens die when they get one or two inches high, and thinks that there must be some secret about raising them. The only "secret" we know is to shade the young plants properly, say with a screen made of lath laid an inch apart, to break the full sun's rays. If they show signs of "damping off," give a free sprinkling of dry sand over the plants.

Osage Orange Seed in Illinois.—A correspondent of the Scientific American writes from Springfield, Ill., that the hedges in that portion of the State were uninjured by the severe cold of last winter. He states that the old hedges have borne an abundance of fruit, which has been bought up for the purpose of obtaining the seed, and that home raised seed has proved more reliable than that formerly procured from Texas.

Osage Orange from Root Cuttings.—Jas. H. Moore, Louisa Co., Iowa, cut roots in pieces 3 inches long, and planted in well prepared soil, 8 inches apart, and 1½ inches deep. In about three weeks each piece of root made 2 or 3 shoots, and though a mole destroyed all the plants, they grew to be 4 or 5 inches high, and he has no doubt of the success of this method.

Hedges from Native Thorns.—Several inquirers. Our thorns will make a hedge, but their foliage generally gets dull soon, and drops early in autumn, hence they are not so well adapted to the purpose as many other plants. The cocks spur thorn has the thickest and most glossy foliage of our native kinds. Gather the fruit when dead ripe, wash out the seeds and sow at once or keep in sand till spring. They often are a year or more in germinating.

The Hawthorn for Hedges.—W. M. Beauchamp, Onondaga County, N. Y., asks why agricultural journals are "so set against the European Thorn" for hedges. We can answer only for one journal, and say that we are not "set" against this thorn any further than that we do not believe it adapted to general cultivation in our climate. In most localities it drops its leaves in time of drouth. As Mr. B. says that this is wholly owing to mismanagement—will he have the kindness to communicate his management and experience?

Thorns from Seed.—S. M. Cheney. If the seeds are planted as soon as ripe, some of them may come up next year, many more will grow the year after, and some stragglers will not appear till the third year.

An Evergreen Screen.—Mr. Fare, Lake County, Ill., finds his garden too much exposed to the highway, and wishes to plant a screen. Nothing is better for this than Norway Spruce. We would never plant any other tree with it in a hedge. It makes a dense screen, grows rapidly, and may be trimmed freely.

Tree for a River Bank.—A. W. Curtis, Green county, Wis., is troubled by the washing of his

river banks, and wishes to know what to plant to prevent it. We should be disposed to try the Osier Willow as promising better than any other plant, but this is not a perfect remedy, and it is difficult to find anything that is.

A "Seedling" Lombardy Poplar.

—T. C. Martindale, Philadelphia Co., Pa., sends us a leaf of what appears to be a Lombardy Poplar; it is from a young plant, which he supposes to be a seedling. There are no known pistillate or fruiting trees in the country, and as the plant was at least 200 yards from any other tree, it could hardly have been a sucker. He asks us to explain the phenomenon of its occurrence. We should say, boys. Youngsters are fond of using poplar twigs to play with, to make whistles, etc., and very probably this young tree grew from a bit stuck in the ground by some boy at play; they grow with the greatest ease.

Where Did it Come From?—A. Ely,

Lancaster Co., Pa., writes that some furrows were turned on a road side, which had not been broken for 10 or 12 years, and that a fine crop of mullein grew on the upturned soil. As this happened in a locality where there is no mullein, he asks where the seed came from. It is simply an illustration of the fact that seeds will lie in the ground for a long time when buried below the influences which favor germination. There is a well authenticated case recorded in which seeds that had probably been buried sixteen or seventeen hundred years, germinated and produced plants.

Bad Success with Chicory.—Mr. G.

W. Thompson, of Essex county, N. J., complains that his chicory, sowed in good ground, blossomed the first year and failed to form roots of any value. The chicory should not bloom the first year. It often happens, from some unexplained cause, that biennial plants will become annuals, and it is not rare to see in a field of carrots a plant here and there with this precocious tendency. That seeds from these annual specimens inherit this peculiarity is shown by the fact that the seeds from the chicory which blossomed the first year, produced plants which did the same. The only remedy is to change the seed. Doubtless breaking off the flower stalks on their first appearance would incline the plant to the formation of root.

Raising Cabbage Seed.—W. T. Keaton,

Shelby Co., Ind., plants his cabbages out in the spring, and then cuts away all the head but the central stalk, which he leaves about the size of a man's arm, and claims that besides saving a part of the cabbage, he gets more and better seed than if the whole cabbage is left, and avoids trouble from the rotting of the head. It may be well to remove a part of the head if there is danger of rotting, but we should prefer to always leave as much as possible of the head to nourish the seed stalk.

The Prairie Seedling Potato.—F. H.,

Greensburg, O., says that he planted three Prairie Seedlings, and gathered only nine potatoes; while three White Peach Blows, with the same treatment, yielded a full half bushel; he asks if the Prairie is not a humbug. It has proved near New York an excellent cropper, of fine quality. For experiments on size of seed see page 336.

Peanuts in Illinois.—T. W. Worley, of

Union Co., Ill., states that from 70 hills, with 3 peas in each, the hills 3 feet apart each way, he gathered 36 quarts of peanuts. This is equal to about 70 bushels to the acre, and it is probable that the yield would have been larger had the planting been done as described on page 341. Mr. W.'s experience is contrary to that of the writer in the article alluded to, for he finds that they must be dug in a few days after frost or they will decay.

Concrete or Gravel Wall.—"H.,"

Bristol, Ind. Good clean gravel, which you say abounds with you, (screened or washed if it is not clean) will do very well for concrete wall, only it requires more cement mortar. The use of wooden blocks, instead of stones, is a new idea, and probably not objectionable.

Straw Protection for Beehives.—

Take a few bundles of straw, open, sprinkle, and turn them. When so moist, that they will not break in handling, grasp a handful by the butts and draw it out; take the heads in the other hand, and drop the butts; a little shake will separate all the short and broken straws, leaving only straight and long ones in the handful. Proceed in this way until you have a good bundle of long straw. Put a tight band about it very close to the heads. Twist some yards of rope from the broken straw. Now open the bundle and put it over the hive, spreading it evenly on all sides, and passing the rope tightly twice or thrice about it just above the fly hole. Then, with a knife or shears trim off the straws in a neat arc close around the hole, which should be so closed that only one or two bees can pass at a time. Ventilation ought

to be provided before the straw is put on, and this is easily done in hives where the honey boxes are on the top, by taking them out and either leaving the holes open, or better, laying a bit of wire gauze over the holes. Thus protected, only very weak stocks fail to winter well, and such you can not depend upon either to live or die.

Brick Cistern.—"S. F. F.,"

Grace, Md. Rectangular cisterns of brick of the form you propose are much weaker, and more likely to bulge and leak than cylindrical ones. If the cistern is to be above ground, build it of wood; if it is to be below the surface of the ground, save the cellar room, and put it in the open ground. The easiest way, if the ground is firm, is to dig out a true cylindrical hole say 8 feet in diameter, strengthening the rims with a sort of grouting of stones, and laying a plank top. It is better to have the cistern arched as a dome, with only a "man hole" left at the top. Such a dome has to be laid upon a support of some kind, which can be subsequently removed. This is easily made of boards and sticks covered with gravel and clay, smoothed over and formed like a true dome. The cement and grouting is laid upon this 4 or 5 inches thick, and afterwards the support is taken away. The top ought to be 18 inches below the top of the ground, and the man-hole is best covered with a stone.

Angle Worms in a Well.—"C. P.,"

Mishawaka, Ind., is troubled by angle worms in his well. A tight curb to keep them from getting in from the surface, and plastering over the wall for about six feet, downward from the surface will probably prevent their entrance.

A Convenient Barn Cistern.—James

W. Fuller, of Lehigh Co., Pa., has recently constructed a barn with cistern attached; the cistern is situated at the rear of a side-hill barn, the wall forming one side of the cistern. A lead pipe placed a few feet under ground connects the bottom of the cistern with the feed-trough in the barn and the trough in the yard. Water can thus be drawn in large or small quantities without trouble or waste of time, and if properly arranged and having a waste cock, it is perfectly protected from frost.

What to Do with the Muck.—Timothy

Hoyt, Cumberland Co., N. J., writes: "Upon this tract is an old saw-mill pond, covering nearly 100 acres, which was in use more than one hundred years, but now is empty, in which is a vast quantity of muck. My neighbors wish me to write to the *American Agriculturist*, and inquire of its readers the best method of preparing this muck for use as a fertilizer." There are many ways of composting muck. Several have been discussed by the editors in past numbers of the *Agriculturist*, and it would be as gratifying to us as to our correspondent, to receive the practical notions of those who have had large experience.—Our favorite method is to throw the muck into a large heap, sprinkling slaked lime or unleached ashes all through it. Then, after lying a while, mix it in large quantities with stable or yard manure, or saturate it with manure liquid. So much of the heap as can not be composted with manure may be applied to the soil.

Dwarf Broom Corn Seed.—Several

subscribers ask where they can get seed of this highly praised variety. Those who have it should preserve it in good order, and communicate with some good seedsmen in regard to prices, before they feed it to chickens. There will be considerable call for it before spring.

To Sunday School Superintendents

and Teachers.—The Editor of the *Agriculturist* has for several years had in preparation a series of four Question Books and Lessons, the plan of which originated from his own experience in the Sunday School. That they meet the wants of others, seems evident from the fact that the first number, which came into use only last year, has already been called for to the number of over a hundred thousand copies, from all denominations of Christians, though in competition with a multitude of other S. S. Question Books. The plan of the work is to furnish, in each volume, a series of 52 lessons (one for every Sunday in the year), consisting of about seven verses each, with suitable suggestions, questions, answers, references, etc., calculated not only to draw out the minds of the teachers and scholars, but also to supply the place of Commentaries and Reference Books, which are not accessible to the great majority of teachers. A special feature is the selection and arrangement of the lessons in order of time, so that with the accompanying outline history, they give a connected epitome of the whole Bible. No. 1 contains 52 lessons from the four Gospels and Acts, giving a connected view of the history from the birth of Christ to the end of the Acts of the Apostles. No. 2 contains 52 lessons taken from the whole New Testament thus bringing the whole New Testament history together, with an analysis of the several

Epistles, their object, time of writing, etc. Most of these lessons are taken from the second half of the New Testament. Nos. 3 and 4 present a panoramic view of the entire Old Testament history, from Adam to Christ, embracing 104 lessons, taken from the Historical Books, Prophets, and Psalms, all arranged in order of time, with a running connected history, which brings all the more interesting events of the Old Testament naturally together in the order of their occurrence. No. 3 extends from Adam to Elijah; No. 4 from Elijah to Christ. No. 3 will be ready early in December. The copyright to these books was given to others who could better publish them, but a special edition of each book is prepared for the *Agriculturist* Office. Price of each series, \$1.50 per dozen; \$12 per 100 copies; single copies 15 cents. If sent by mail, the prepaid postage requires 4 cents extra on each book, or 3 cents each in packages of ten or more. Single copies for examination will be sent postpaid for 18 cents each; or three copies for 50 cents.

Plowing too deep for Corn.—This

happens when much of the cold subsoil is brought up. When corn is planted on this, it germinates slowly, and afterwards grows slowly. It is better to invert the sod in the usual way, and then follow in the furrow with a regular subsoil plow to deepen and loosen the soil below, but not bring it to the surface. If only an inch or so of subsoil be brought up, and then harrowed fine mixing in manure, before planting or sowing, no harm will be done.

"What is a Compost?"—This name

is properly applied to any manure made by mixing various substances of fertilizing value, so that by their action upon one another, or by the effect of the mixture, their joint value is enhanced. Thus, when we mix a bushel or two of lime slacked with brine, or of ashes, with a load of muck, the result is a compost worth more to the soil than both applied separately. So when we take bone dust, hen manure and leached ashes or plaster, in judicious proportions, we make a compost which is good for manuring corn in the hill, for a top-dressing for grass, etc., and so composed or "composted" as to be more conveniently handled, and worth more than if separate. "Compost" does not mean anything in particular, but all compound manures in general which farmers make.

Compost the Corn "Stubble."—J.

F. W., of Baltimore Co., Md. advocates the clearing of cornfields of stubs in the autumn, and mixing them with the dung in the barn-yard where the cattle tread and work them up during the winter. A better plan is to compost them with lime or ashes, or some manure in active fermentation. There is no doubt about the value.

Kerosene Oil for Lice on Fowls.—

Charles Arnold, of Cumberland Co. N. Y., says that before he was aware of it his fowls were covered with lice. Taking a small swab he applied a little kerosene under their wings, and has noticed none of the vermin since.

Vinegar from Cider.—C. H. Wheeler and

others. The two conditions for the conversion of cider, or other fruit juices, into vinegar, are a temperature varying from 72° to 100°, and free access of air to the liquid. Both these are generally disregarded. The proper temperature is easily managed; free contact with air can be in a measure secured by frequently transferring the liquid from one cask to another. The addition of some "mother," as the plant which lives in vinegar is called, or some old vinegar, hastens the operation. In vinegar factories the liquid is allowed to trickle down slowly through a tall cask filled with beech-wood shavings, a provision being made for a current of air, from near the bottom of the cask, to pass up through it and come in contact with the liquid, which being spread over the shavings exposes a great surface, and the change into vinegar is very rapid.

Keeping Sweet Potatoes.—A. W. Curtis,

Green County, Wis. A warm, dry place is necessary. It will not do to expose them to frost or any where near it. Set the barrels in a warm cellar, upon timbers or something to raise them from the cellar bottom. They need no special provision for ventilation. Dry cut straw has been found to answer perfectly as a packing material.

Molasses Gingerbread.—Soda or Saleratus

ought never to be used in food, except to correct acidity, unless some acid be added to neutralize the alkali. Whenever they are properly used, the carbonic acid gas which they contain is given off in the dough or batter, and puffs it up. On this depends our ability to raise gingerbread with molasses, which contains a considerable quantity of acid. This acid combines with the soda or saleratus, and sets at liberty the carbonic acid which expands all through the batter and makes it light. Much sugar or molasses prevents the action of yeast.

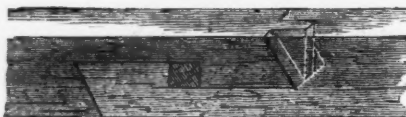
OUR NEW TERMS are arranged to just cover the cost of supplying the paper. (Premiums, etc., are paid from other resources.) The advance is very little, the price still being only \$1 a year in clubs of 20 or more, which it will be easy to raise at almost any Post Office. For ten subscribers the price is \$12, or \$1 20 each. For four subscribers, \$5, or \$1 25 each. For single subscribers, \$1 50 per year. Every subscriber can easily secure three others to join him. Terms of the **German Edition**, \$2 a year; five copies, \$7; seven copies, \$10; and ten or more copies, \$1 50 each. The German edition is more expensive than the English, and contains extra reading matter.—**N. B.**—These terms apply only for this month. We hope to continue them through the year; but any considerable advance in paper would render another increase in the subscription rates necessary.

IS YOUR TIME UP?—This is to remind our readers that the present paper closes the Volume, and that with it, a considerable number of subscriptions now expire. Supposing that each subscriber remembers his own time of expiration, we save the expense (now unusually heavy) of sending out individual notices. A large number have previously paid beyond this time, or have recently renewed their subscriptions for the next volume. We invite all who have not done so, to send in their renewals at once. It would be a very great convenience to us, to receive all names the first of December, so as to get them regularly entered in the State mail books, and the wrappers written up, before beginning to mail the next number. Will each reader who is not already entered for next volume, please oblige us by forwarding his renewal as early as may be? The best time will be when reading this notice, and while the subject is in mind.—**The New Terms**, referred to above, are put at the lowest possible figures, to meet actual cost, and they will not bear hard upon any one.

We scarcely need hold out any special promises or inducements for the future. If the paper has been a good one in the past, we know it will be still better. The corps of Editors cannot be surpassed—earnest, active, intelligent, practical men—enthusiastic in their calling—studious to acquire the best knowledge from every source, that they may dispense it to others. Devoting their whole time and energies to the work, and zealous to do all they can for their readers, they cannot fail to bring into these columns a fund of pleasing and useful information, that will be of great value to every reader. No special change in the plan of the paper is intended, but the daily increasing experience of the publisher and his associates will suggest constant valuable improvements. O. J.

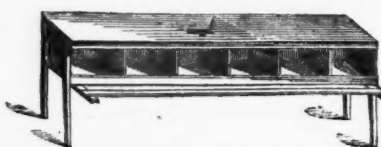
One Hundred Thousand!—The Goal Reached!—For several years past we have aimed at a circulation of a round 100,000 copies monthly. While going rapidly toward it, the rebellion broke out and cut off many subscribers in the Southern and Middle States. Since then, though in the midst of war, the circulation has gone steadily upward, and we now print fully One Hundred Thousand copies for actual circulation. (Four hundred reams of 500 sheets each (not 480) are required for printing this number. When put up for mailing, one month's numbers measure in the mail bags just about one thousand bushels, and the bags make up sixteen great cart-loads!) As the paper is read by several members in most households, and as very many loan their numbers to the families of neighbors, or exchange with them for other journals, we suppose we may count our readers at nearly a million. So far as figures are concerned, our ambition is satisfied. We have set no higher figure, and shall aim at no other specific number. There are other millions who would doubtless be profited by reading the *Agriculturist*, and we hope it will in time find them. It now goes regularly to nearly all the Post Offices in the United States and Territories, and to a large number in British America, as well as to South America, Europe, Asia, Africa, and to the Islands of the Ocean. We invite all present readers to do what they can to increase its sphere of usefulness in their several localities. Our future ambition will chiefly be to continue to increase the intrinsic value of the pages. No labor, no care, no expense will be spared, to make the paper worthy of a place in every household, and to gather and condense into its pages the greatest possible amount of reliable and useful information. Engravings that

please the eye, and communicate information far more effectually than can be done in words, will continue to be a prominent feature.—We return our warmest thanks to the multitude of friends who have aided in bringing the circulation up to its present condition. They have doubtless been impelled by a desire to disseminate sound and useful information, and, we have often felt, by personal regard for the editors. We trust that the former motive, at least, will lead them to continue their efforts to place the paper in every family. We will try to make it eminently useful wherever it shall find an entrance.



A good Timber Splice.—It is worth while to know how to make a neat and firm splice without nails, iron bands, or any other such things. The one here figured comes easily apart, on driving out the rectangular bar or pin in the centre. The locking ends are alike in shape, which is distinctly indicated in the engraving by the light and dotted lines of the upper piece.

The Michigan Agricultural College.—The catalogue for 1864, just received, shows that this institution is in a prosperous condition, and is increasing its facilities for instruction in the various departments of its educational course. We are gratified to notice the appointment of A. N. Prentiss as Professor of Botany and Horticulture, and that of Oscar Clute to the chair of Mathematics. These gentlemen are both graduates of the college, and the institution is fortunate in being able to retain them. Address Prof. T. C. Abbot, at Lansing, Michigan, for further information desired.



Hens Nests.—Butter and lard tubs make first-rate nest boxes, not liable to be troubled with vermin. The plan of Mr. Mabbets', alluded to on page 335, is here figured. The box is 64 feet long, 1 foot high, 1 1/4 feet deep. The top lifts off. The front is sufficiently open to allow free ingress or egress. The partitions between the nests fit in grooves, and may be drawn out, and the whole easily cleaned and whitewashed. There are alighting bars in front, and the whole is on legs. It may be made two or three stories high when desirable.

Singing in Sunday Schools and families has been promoted by the introduction of Bradbury's Golden Series, as much or more than by any other work. We are pleased to notice that he has issued a new number, "The Golden Censer," which is fully up to the standard of the previous issues, and this is high praise.

Greeley's "American Conflict."—The first volume of the most remarkable history ever written contemporaneously with the events it records, has been given to the public by Horace Greeley, through the publishing house of O. D. Case & Co., of Hartford, Conn. Even the author's bitterest opponents unite with his friends in admiring the conscientious accuracy of his statements, and the fairness with which he presents the political questions bearing upon the rebellion, that in their day were objects of the most acrimonious discussion. The work is of very great interest and value, well illustrated, and brings the history of the rebellion from 1776 down to 1862. It is sold only by subscription at \$4 1/2 and \$5. A second volume is to follow at the end of the war.

Sundry Humbugs.—Here are three hatfuls of swindling schemes, sent in from all parts of the country, which we have not room to show up in detail this month. Fletcher Bros., Box 5,549; Fletcher & Co., Box 3,763; Thomas Boulton & Co., Box 5,713; and Egerton Bros., Box 4,196, N. Y. Post Office, are the same, or work together, using the same circulars except the address. They are all very anxious to give somebody in every town a prize of ever so many thousands of dollars, to secure their future aid in swindling others. But whom will they get as customers, when they make the same "private" offer to every man in a town whose name they can get?—Arrandale & Co., offer watches, &c., "worth \$50 to \$150 each," and down to \$4, nothing less, for \$1 each to greenhorns who don't see through this plausible pre-

tended offer. H. R. Brunswick's letters, dated nowhere, post-marked at Troy, N. Y., ask thousands of people to send him, (part to Medina, N. Y., and part to Bergen, N. J.,) \$10 each to pay for ticket 1,649 in the "Cos. Art. Union Ass.," at London, New York, which has already drawn \$200. To get the same prize for each he offers to lie the ticket through. Others offer to tell lies at a cheaper rate—some as low as \$2.—Solon Edwards, Jr., Hubbardsville, N. Y., asks \$10 to \$20 for a similar swindle. We thought real gold was plenty on the Pacific coast, but Anson Marsh & Co., of Ophir, Nevada, and Harris & Co., of San Francisco, Cal., offer the bogus article in immense quantities for a very little of the genuine yellow dust to all foolish people who do not see through their bogus schemes. Enough now. See p. 339.

Annual Register of Rural Affairs.—John J. Thomas has given us another of these neat and useful annuals. Besides containing an almanac, it has over 200 pages filled with excellent matter relating to farming, horticulture and rural affairs generally. Sent by mail for 30 cents. The present one for 1865 is the 11th of the series, the whole forming a valuable compendium.

Keeping Brompton Stocks.—W. E. D. keeps Brompton stocks through the winter by placing the plants, which have been well grown through the summer, in boxes in autumn and setting them in an attic before a south window, where they will not freeze before January 1st, and will remain frozen until spring. Some plants have been kept in this way for several years, and they increase in beauty with each successive year.

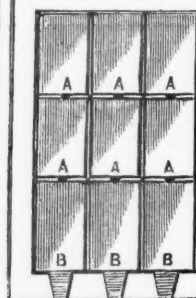
Further Contributions to the Agriculturist Sanitary Fund will be acknowledged next month.

Substitute for Grafting Wax.—W. K. D. finds that rosin melted with alcohol in sufficient proportions to form a thick paste, and then applied with a brush, answers very well for all grafting operations.

Keeping Bees in Cellars in Winter.—"P. V. N. M.," of Saratoga Co., N. Y., asks: "Is a large house cellar, containing vegetables, etc., suitable for wintering bees in the movable comb hive?" Also, "would it be a safe place for those in the common box hive?" Unless you have a large number of stocks, we would not advise to house them; in fact, we have little faith in housing bees at all. See Mr. Quinby's directions on page 330.

Killed them with Kindness.—A gentleman in Orange County writes us an amusing account of the manner in which he killed his "Agriculturist Strawberry plants" by "extreme care and pains-taking." His plants came in good condition and he prepared his ground with all sorts of good things. Then he carefully made a mound with sifted chip dust, to which he added a few handfuls of ashes, and set the plants thereon. Earth was drawn around, and some strong manure put over that. But they died, while those of a neighbor, "just stuck in the ground," lived and did well. He concludes "that care and pains-taking are humbugs, and that helter-skelter, slash-dash, hit or miss, are the golden rules of life." Our friend has our sympathies, and lest he can not console himself with the thought that he has established the fact that strawberries don't do well in "dust and ashes," he shall have an extra plant next spring.

Window Sashes for Hot-beds.—It is



often convenient and economical to use old window sash on hot-beds, but there is always the annoyance of water standing on them. "Old Subscriber, of Somerville, Mass., has a very simple way of obviating this difficulty. He cuts a piece out from the putty side of each horizontal cross-bar, and also makes grooves or spouts in the frame of the sash, cutting in each case down to the level of the glass. The figure shows where these water channels are made. The sides of ordinary window sash are usually wider than is needed for strength, and shade the bed more than is desirable. The long sides are planed down as much as they can be without weakening them.

"As Usual" Post Office.—Where is it? In what State? Plenty of subscribers ask us to send their paper "as usual."—We can't find the place

A Free Copy of this December number will be sent to each new subscriber for 1865, received during the first of the month, or before the edition is exhausted

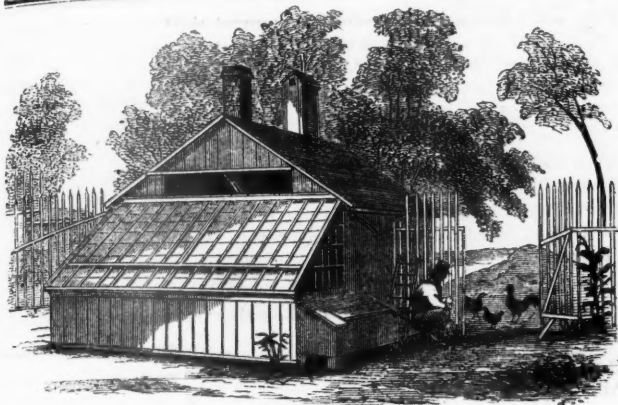


Fig. 1.—POULTRY HOUSE—PERSPECTIVE.

Notes on Poultry and Poultry Houses.

At this time of the year it is easy to stock a poultry yard with excellent fowls in good condition, at the price they will bring for food. Good sized pullets bought in December, placed in warm, light, clean quarters, fed with grain regularly, some flesh and some green vegetable food frequently, will give a good supply of eggs all winter, except, perhaps, in the very coldest weather. There is no more delicious food than poultry and eggs, which, pound for pound, may be produced at a less cost than pork. We have heretofore given good plans for poultry houses,

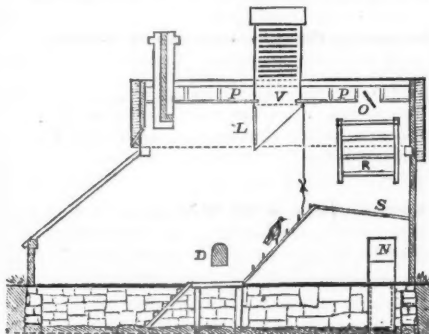


Fig. 2.—SECTIONAL SIDE VIEW.

each possessing some advantages over others, and now we present this one in use by Mr. J. H. Mabbet, of Saratoga Co., N. Y., which is in some points superior to the other good plans.

Figure 1, is a view of the house from the yard, taken from a photograph, and of course accurate. The building is 12x17 feet on the ground. A warm dry spot was selected, the ground dug out two feet deep, and a good foundation laid even with the surface. The building is framed 12x12 feet, having 5-foot posts, with matched pine up-and-down boarding outside, and lathed and plastered inside, the south end being left open, and a door (5 feet by 2 feet) conveniently placed in the middle of the east side. The south end is framed out 5 feet from the building, and similarly boarded and plastered 2 feet high on the south and east, and higher on the west side. This low part is covered by two green-house sashes, each 6 feet square, adapted to 8x10 glass, supported upon rafters resting on the tie beam between the plates of the main part. A triangular sash fills the east end above the boarding, and admits the early morning sun. There are several advantages in not having the glass come nearer the ground;—there is not so much danger of its getting broken, and the passing and doings of men and animals outside are not likely to alarm the fowls. The roof

should not be of less than a quarter pitch, and in the gable above the tie beam a long sash arranged to open outward is placed for light and ventilation in summer. The plastering is continued up on the underside of the roof to one foot below the ridge, at which point it is horizontal as shown in fig. 3. The ventilating arrangements are very good. Few poultry raisers seem to be aware of the great necessity places where hens roost. It is noticed by every body that they will always roost at the highest point they

can reach, therefore if their roosts be near the roof it is very likely to happen that the air becomes close and poisonous. We have known repeated instances of the birds falling from or being found dead on the perches, from this exposure to noxious gases, which is also a frequent source of disease, of paucity of eggs, and of inability to fatten poultry. First there is open draft up through the ventilator (V) in the middle of the roof. This may be shut off by raising the swinging door (L) by the cord attached to it. The open space (P) in the peak of the roof above the horizontal part of the ceiling, has openings into the ventilator. Thus the space between the roof and the plastering is ventilated, and cooled in summer, being open at the eaves as well as above. There is an opening (O) into this space (P), immediately above the roosting ladders, (seen in figs. 2 and 3,) which provides a free escape for the breath and exhalations from the fowls on the perches both winter and summer, and in winter furnishes the only ventilation. The roosting ladders (R) are made of round sassafras sticks, locking together firmly at the top and set into sockets at the base of each, so that they may easily be lifted out and cleaned. Below the roosts is a shelf (S) 11 feet long and 5 feet wide, supported so as to incline backward a little. On this a layer of muck may be spread to receive the droppings, and when it is necessary to clear off the manure, the shelf is lowered and scraped clean. Access to the shelf and to the roost is gained by a bird ladder. D, is a door to the dusting room, outside the house and opening to the yard.

In one end of the building a small brick chimney is suspended from the roof. This is to

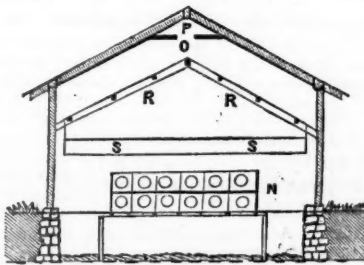
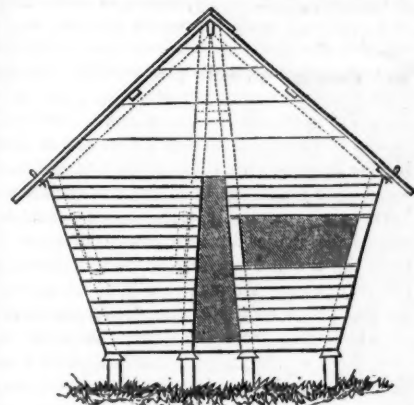


Fig. 3.—SECTIONAL END VIEW.

take the pipe of a small stove by which to maintain such a temperature at night in the coldest weather, that broods may come off in February, or at any other time, and that continued cold weather may not check the laying.

The fountain used for supplying fresh water constantly, was figured and described on p. 308 (Nov.) The feed box is 6 feet long, 6 inches wide, 3 inches high in front and 6 behind. The top is a frame with slats. Holes are bored in the back

to hang it up by, 6 inches above the ground. The nest boxes are placed outside in summer as shown in fig. 1, and are so arranged that one may remove the eggs without entering the house. In the winter the nest boxes (figured in the "Basket") are within, under the shelf below the roosting ladders. All interior arrangements are constructed so as not to occupy any room on the floor—the nest boxes, feeding box, water arrangements, etc., all being raised above the ground. The floor is covered by spreading two loads of fine gravel or coarse sand evenly over it, which is occasionally raked over and thus kept clean. Mr. Mabbet in speaking of his house and fixtures, says,—all of which I have carefully tried and can well recommend."



A Good Corn Crib.

Wm. D. Morton, of Lapeer County, Mich., presents the readers of the *American Agriculturist* a plan and description of his corn crib, which we amend a little by setting it upon posts, with tin pans bottom side up over their tops, in eastern fashion, to keep the rats out. Mr. M. has had it in use two years. The frame is of 2x4 inch scantling, and the covering of inch boards. It consists really of two cribs, 3 feet wide at the bottom, and 5 feet wide at the top, framed together as shown in the engraving, and covered by slats or boards. The dotted lines represent the frame. Tenpenny nails are sufficient to hold the slats on the outside, and this looks much better than having the studs on the outside. The doors are of slat boards like the rest, with projecting cleats, two on each side. They are put in or taken out by lifting them up to the board above, and moving the lower ends in or out. In the sketch one door is represented in, and one removed. When it comes to filling the crib to the top, a board in the roof is loosened by withdrawing one of the pins seen in the engraving near the eaves, and slipping the board out. Mr. M. has two such boards in his 12-foot house. He says a house of the dimensions given for the end elevation and 12 feet long will hold about 400 barrels of ears. The length of course may be regulated by the convenience of the builder and the demands of the farm, present and prospective. Some kind of a corn crib is necessary, and the rail pens, at best fit only for corn which is to be fed to hogs before really cold weather sets in, should give place to suitable structures when possible. Similar corn cribs in use in some parts of the country are found convenient, and easily constructed.

SOUND ADVICE.—If you would relish food, labor for it; if you would enjoy raiment, pay for it before you wear it; if you would sleep soundly, take a clean conscience to bed with you,

How About the Barns?

Are they in complete order for the winter? If not, now is the time to put them so. For horses and cattle to thrive in flesh, or for cows to yield good supplies of milk in winter, they must be kept warm: In order to this, they need to be sheltered, or if poorly sheltered, they must have a wasteful superabundance of food. The barn-yard, where during pleasant days the stock will spend much of their time in winter, ought to be protected on the north and west sides, by the barns, or sheds, or by fences high and tight. There ought to be no sneads that stock can run under whenever they choose, and they should be so large that all can find room. A good supply of straw, leaves, or other litter, will not only keep the cattle dry and warm, but will absorb manures which would otherwise go to waste. And, while pleading for warm and cosy winter quarters, we must also put in a plea for good air within them. The stalls should be cleaned out twice a day, and at evening the floors strewn with sawdust, tan-bark, or some other absorbent bedding; and then if the barns are reasonably tight, some provision should be made for ventilation; at least let there be a small opening or two, somewhere not very remote from the breaths of animals, from the secretions of their skins, as well as from their excrements, liquid and solid. Many barns are so ill-kept that it is always disagreeable to enter them. On first opening the door in the morning, the pungent odor is often almost strong enough to strike a man prostrate. And are we to suppose it does cattle and horses no harm to breathe such pestilential vapors? Their frequent coughs, sore eyes, and other diseases show plainly enough that they suffer sadly.

Sheltering Cattle Saves Fodder.

A certain amount of food is craved by a healthy beast, even if it do little labor and is kept comfortably warm all the time. The appetites of different animals vary considerably; and some animals are more easily kept in good condition than others, when in health and under the same circumstances. These facts fall under the daily observation of all farmers. The temperature of the animal body is always much warmer than the surrounding atmosphere, except a few hours at a time in the heat of summer. It requires a considerable consumption of food to maintain this heat, and the colder the air, the more heat-producing food is eaten by the animal as a natural consequence. If it can not get all that it needs, its system must nevertheless keep up its temperature, and this is done first at the expense of the fat, and afterward of other parts of the body. The animal grows thin, and can endure far less labor or exposure than if well fed. Work causes a similar increased consumption of food to supply the waste of the muscle which is worn by the labor. To secure the greatest advantage from a certain amount of food, animals should be sheltered, and the warmer their stables are, the less they will eat. The question to be considered is: How warm may they be kept consistently with health? Fresh air is a necessity to neat cattle and horses, and they will do well in very warm stables if there be good ventilation. The same is true of hogs. Sheep, on the contrary, will

not do well if kept very warm. They demand a much freer ventilation, if maintained in good health. When shut up simply for rapid fattening, they feed better and fatten faster if their pens are airy; but when kept for breeding, it is essential that they have but little more than thorough shed protection from the storms and high winds. Statements in regard to cooked food and its great advantage over uncooked, for most classes of stock, are to a very limited extent applicable to sheep. They need open air, (not exposure to storms,) and plenty of good food.

Scotch Economy in Manures.

A recent traveller in Scotland mentions that among the poor in many villages, each family has in the back yard a compost hole, about four feet square and as many deep, where ashes, soapsuds, cleanings of pig-stye and garden are put. The children go out in the morning and evening to gather horse and cattle droppings along the public roads for a mile each way, and carry them home in baskets and small wheelbarrows. The same may be seen all over Europe, and the accumulations of manure secured by this industry of poor children is sufficient to fertilize a great many acres of vegetable gardens surrounding the smaller cities and villages. A horse probably drops as much dung in the street as he does in the stable, in proportion to the time he is in each respectively. If we assume that in any town there are on an average 60 horses in the street 12 hours in each day, then they daily leave upon the street as much manure as one horse would make in a month.

Care of Manure, Both East and West.

Eastern farmers have long known that "Manure is money," and though many have been wasteful of it, yet they have saved it much better than their brothers at the West. We are glad to know both from personal observations and the reports of correspondents, this great point in economical husbandry is beginning to excite interest in a measure proportional to its importance among western farmers. They find the corn crop greatly benefited, that for tobacco it is essential, and that many other crops are surer and better for its application. The best way to preserve manure, usually available, is to compost it with vegetable mold, under cover. Where straw is abundant, as on many western farms, it may take the place of muck or sods in the compost. Manure thus composted, though not under cover, keeps up fermentation in a slow way even in winter, and where muck is used, is in first-rate condition in spring for common use. Very strawy compost, in some cases will not be sufficiently rotted, unless the heat be kept up by the addition of horse manure, or by frequent wetting by pumping the liquid manure of the stable over the heap in mild weather. As most farmers are situated, it would be difficult to compost the manure in this way either under cover or not, especially if they have never been in the habit of taking good care of manure. If cattle are kept in barns or sheds, and the manure be removed, it may at least be spread so as to form a compact heap, and be trodden down every time a fresh lot is added. This will be found of great advantage. It is better yet, to enclose it and keep a few hogs upon the heap. When young cattle are kept in airy sheds, the practice of letting them stand upon their own manure, if they be well littered, is not a bad one, though the manure

which thus accumulates does not ferment or rot scarcely at all, and before using ought to be overhauled and composted, or laid up to get a good heat. It is a poor plan to keep cows thus. They require more food than when in warm and closer stables—the free air is necessary to health if they stand on the manure—and their food being more watery, the condition of the stable is apt to become uncomfortably moist. Manure saved in this way contains all the urine, which is too often lost, wholly or in part, and is really the most valuable portion of the manure. No system of making manure should be adopted which does not save all the liquid excrements.

Are Manure Cellars Under Barns Best?

It is very desirable to have manure under cover, that it may continue its fermentation all winter; that it may be protected from the action of sun, wind and rain; and that it may be overhauled and composted with muck or other things. We know of barns constructed so well, and provided with such good ventilation, that the manure below does not seem to have any bad influence upon the cattle or the fodder. Others, however, are defective in some points, and have at times, the rank, close smell of fermenting manure pervading the entire building—the ammonia being distinctly perceptible in the stalls, and without doubt seriously affecting the health of the stock. This is especially true where a number of horses are stabled. As a general rule it is preferable even in hill-side barns with the stock standing upon the ground floor, to have the manure thrown back of them into a lower and separate apartment, a "manure cellar", with a grouted bottom and pit for containing the liquids, with a pump for throwing the liquid manure over the pile, and so arranged that the whole can be conveniently worked over and mixed with muck, sods, soil, and other vegetable matter. The fumes from the heating manure will thus not interfere with the contents of the barn nor with the health of the stock. Over this manure shed or cellar may be kept the litter for bedding, pumpkins early in the season, tools, etc., and if it can be constructed so as to be accessible to loaded carts, muck may be stored always ready to mix with the manure daily thrown out from the stables.

What Sized Potatoes are Best to Plant.

Mr. George Maw, an English experimenter, has made some careful trials of the effect of planting seed potatoes of different sizes. He planted in rows 2 feet apart and 1 foot in the row. In one experiment, 20 potatoes weighing 2 ounces, and the same number weighing 4 and 8 oz. each, were tried. The yield was as follows:

The 20 of 2 oz. each (2½ lbs.) yielded 21 lbs. 5½ oz.
The 20 of 4 oz. each (5 lbs.) yielded 29 lbs. 0½ oz.
The 20 of 8 oz. each (10 lbs.) yielded 35 lbs. 3½ oz.

Extending these results to an acre, shows, after deducting the weight of the seed, that there is a gain of 5,069 pounds in using the 4 oz. in preference to 2 oz. sets, and in using 8 oz. sets the gain over the 2 oz. was 6,942 pounds. Experiments with the above different sorts show even a larger gain than this, from using large seed. Mr. Maw is of the opinion that the use of larger sets produces larger potatoes, and believes that not only the quantity but the quality of the crop may be improved by always planting the largest and best, and that the potato-producing power of land may be increased one-third by using large seed.

Poultry and Poultry Houses.

On page 335, will be found a description of an expensive and elaborate, yet not extensive poultry house—a good one, however, in every respect. In connection with it we publish the following, just at hand, to give our readers the view of the subject from a no more practical or common sense, but a more usual stand point. "C. M. W." of Dutchess Co., N. Y., writes:

"In every essay that I have read on the construction of poultry houses or 'Henneries,' or on points of importance to the well doing of fowls, I have, with one single exception, found it set down as an imperative necessity that as much light as possible should be admitted into the building; and, in one number of your paper there is an engraving of Mr. Vassar's poultry house at Po'keepsie, the whole front of which is glass. Now sir, whence arises the opinion that fowls require, or at least desire so much light? I ask this simply because my experience has proved the contrary to be the fact, so far as my three or four different breeds are concerned. Having one of a series of new stables and other buildings to spare, I used it for my fowls. It is a room 16x18 feet and 10 feet high, and lighted by two large windows. I made it every way as I thought, an enticing habitation, supplying it with every latest approved convenience for laying, sitting and roosting, and scrupulous privacy. Food and fresh water, ashes and lime always *ad libitum* in the house as well as outside, not omitting soap boilers' scrap (greaves) "at discretion." They could roam where they pleased, feed when they pleased, lay where they pleased, yet in spite of the light, the comforts, and conveniences of the large, new, clean apartment provided for them, they, almost without exception, made nests in the darkest corners of the barn, or most hidden and inaccessible parts of the mow, and in such places, (the darker the better,) and only in such did they seem really content to lay, and there they did lay, sit and hatch, (as far as results went) to my entire satisfaction.

"The more pains and care I took with my fowls, (beyond, of course, clean and comfortable quarters, and plenty to eat and drink,) the less profit I derived, and fewer chickens I invariably raised. The hens would insist on making and sticking to their own nests out in the meadow, or beside the stone fence, or among a parcel of old boards at back of the barn, and such hens I therefore left to themselves to do as they pleased for themselves, through all sorts of weather, wet and dry. They invariably brought up all their chickens, which were always harder than any of the others, they got over the "gapes" without interference from me, and (by reason of the mother never being kept from them under a coop,) were never successfully assailed by the common enemies of young chickens, because the mother was always present to defend them, which she frequently did most valiantly and triumphantly. I am the very last man in the world to uphold that horrid "shirking for themselves," which so very many think good enough treatment for fowls, but I do believe that so long as we supply them with all necessary provisions and comforts, it is better to leave the disposal of these to their own interests, rather than force upon them any particular human theories of 'education,' (as the French call it,) which I for one, at any rate, have never found any great reason to crow over."

Remarks.—A hen likes secrecy, and will hide her nest, like other birds. This natural tendency of

birds to shun light leads all birds, wild or domestic, to place their nests where the sun can not shine upon the eggs, which would spoil them. They seek also to hide them from their enemies. The nest-boxes should therefore be provided in the darkest part of the poultry-house, and be shut off from the light. This is usually recommended, and always should be. It is advisable to have hen-houses light, where they are designed for winter quarters, and in case the fowls are to be kept shut up. The fowls if well kept will thrive even in close quarters. Still they certainly do better, and enjoy life better if they have their freedom. The art of a good poulterer is to give hens in confinement such care, food and little conveniences, that they shall not pine for this liberty. This may be done and is done by hundreds. It is a great art to make hens choose to lay exactly where you want them to, and to take the best of care of them by letting them have their own way.

The Food of Fattening Animals.

Food supplies the constant wastes of the system, for there is a regular wear and tear of the whole animal system, even if the animal do nothing but eat and sleep; it is, in a certain sense, a labor to him to live. Every muscular effort, no matter how slight, causes a corresponding loss which is made up by the food. The oils and fats of the animal contain no nitrogen. This element is particularly the characteristic of the muscular parts of the system, that is, the lean flesh. Muscular exertion causes a waste or consumption of these parts, and a demand for food from which they can be supplied.

It is necessary to the life of warm blooded animals that the warmth of their bodies should be uniformly at a point much above the usual temperature of the air. To meet this necessity there is a regular and constant consumption of certain substances in the blood, chiefly those which contain no nitrogen. These may be supplied directly from those kinds of food which abound in starch, gum, sugar, cell-tissue, oils, etc, some animals even digesting woody fibre, which belongs to the same class of substances. When more of this kind of food is eaten than the requirements of animals demand, a large part of it is stored away as fat, against a time of possible need. This fat is deposited where it will serve as a blanket against the cold, and between the muscles, so that friction of the muscles upon one another, and bruising from external sources, will be prevented. An excess of nitrogenous substances in the food, however, is not retained in the system, but passes off in the manure. Reasoning from these facts we should conclude that if growing animals and full grown fattening animals were to receive the same kind of feed, the manure of the former would be much less rich than the latter, for it is nitrogen which gives value to manure, and the growing animals would appropriate the nitrogenous part of the food to build up their bodies; and this is true, as proved by many experiments. Milch cows take from their food the nitrogenous part, to make up that part of their milk which forms cheese, and which nourishes the muscular system of their calves; so their manure is very poor. The experiments conducted with such extraordinary care, especially with sheep and pigs, by Lawes & Gilbert, published ten years ago, demonstrated that the amount of food consumed by fattening animals, and the rapidity of fattening, both depended upon the quantity of non-nitrogenous constitu-

ents consumed, while the value of the manure depended on the nitrogenous constituents.

Cutting, Soaking, and Steaming Fodder.

The present prices of hay and all kinds of coarse fodder, as well as roots and grain, lead farmers to consider willingly all means to save food. We give elsewhere some hints on the saving which warm stables will effect, and there may be also a very great saving in feed if it be put in a more digestible and assimilable form, than if fed in its natural state. The labor of comminuting the food is saved to the animals if it be done by machinery; nevertheless, it is not well to reduce it so fine as to do away with the necessity of chewing thoroughly. If the feed of cattle be so fine and pulpy as to pass directly into the digesting stomachs, not being retained in the first stomach, and subsequently chewed as cud, the digestive system of the animal is interfered with, and disease ensues, as is the case with cows in the swill-milk stables. However, there is no such danger except where some food similar to still-slops is used, and fed without a proper admixture of hay or straw. There is a decided gain in simply cutting up the hay or corn fodder, and wetting it with less water than it will absorb in 10 or 12 hours. Salting it slightly, and sprinkling it with a small quantity of meal, or bran, make it still more relishable, and even the butts of cornstalks thus prepared are eaten very clean. If the mixture be allowed to stand till it heats somewhat, it is still more relished, and goes still further. The value of corn fodder is fully seen when treated in some such way. In our opinion, and that of many very discreet farmers, it is worth as much for cattle food as common hay—not quite so much as prime timothy, or first-rate hay of mixed grasses. A still further appreciation in the value of fodder, of almost all kinds, will be observed when it is cooked. This is most readily done by steaming, and for this purpose the most convenient way is to have a hoghead or other tight containing vessel hung on trunnions, or otherwise suspended by the middle, so that it may be turned over like a bell, or to one side at least, when it is to be emptied. When the fodder is put in, with perhaps a small quantity of water, a jet of steam let into it, and carried to the bottom by a pipe, will rapidly cook the entire mass, and often a good deal more than the vessel will hold at first. The boiler may be kept at a distance from the stalls, so far that there will be no danger from the fire. There are several excellent agricultural steam boilers; some of the best were at the recent fairs, and one has been lately advertised in the *Agriculturist*.

Blue Grass Seeding at the West.

A correspondent "G." writes to the *Agriculturist*: "The Kentucky blue grass seed may be sown at any time during the year. I prefer autumn and winter. Pasture lands are best sown in autumn, when the stock are likely to thoroughly tramp the ground as the pasture becomes short. Wood lands may be sown after the fall of the leaf. The under growth and leaves should be well cleared off before sowing. In all cases after sowing seed, stock should be turned upon the ground so as to tramp it thoroughly. I prefer the stripped seed, as it is cheaper and will take hold of the soil better than what is called clean seed. Stripped seed before sowing should be thrown upon the barn floor and whipped, to make it loose and more easily sown.

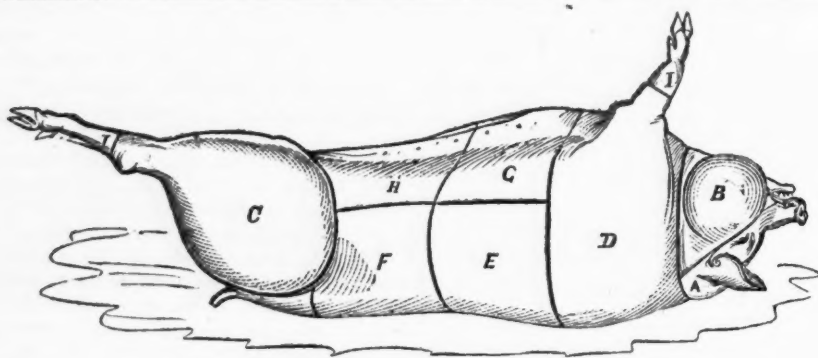


Fig. 1.—OUTSIDE OF CARCASS OF HOG—SHOWING THE CUTS.

Sundry Hints on Hog Slaughtering.

Slaughtering may be most conveniently done as soon as the weather is so cold that meat will keep well. Give the hogs no breakfast. Have an abundance of boiling water ready, say two-thirds of a barrel to a barrel for one or two hogs, according to size—a large half hogshead tub half full, for a 180 to 250 pound hog—and add about two or three pailfuls of boiling water for each additional hog to keep up the temperature, taking out an equal quantity, if necessary. The water ought not to be boiling hot when the pig is scalded. If it is too hot the skin will be partially cooked and the hairs will stick fast. It is best to try it by dipping an ear, or the nose first. It is usual to add about one twelfth part of cold water. Scald as soon as the hog has done bleeding and is dead; remove the bristles at once; never let a hog lie after scraping, but put in the gambrel and hang him up. If left to lie the blood will settle in the flesh and skin where it is subjected to pressure. If there are several hogs to kill there should be hands enough to stick and scald some, while others are being scraped and dressed, otherwise much more hot water will be required, or the animals will cool too much. The sooner the insides are taken out the better, for the easier will it be to remove the fat from the entrails. This is readily done, when one gets the knack, with a sharp knife held still while the entrail is drawn across it.—When the hog is hung up make a clean straight cut from the vent to the breast bone, cutting through the "Aitch," or pelvis bone, (L, fig. 2), between the hams, first, and then, passing two fingers of the left hand into the cavity of the abdomen, draw the belly out; hold the knife with the right hand between these fingers, and as it cuts, follow down with the left, drawing the walls of the abdomen out so as not to cut the entrails. Then splitting the breast bone, (M) cut through to the sticking place, and put in a brace to hold the sides apart. In cutting the breast bone be very careful not to let the knife touch the stomach and defile every thing with its contents. Now grasp the intestine at the vent and cut it clear; holding the entrails in the left hand, let their weight aid the right hand in tearing them free from their attachments. At the skirt, or diaphragm, the stomach being removed with them, it will be necessary to use the knife to sever the connection; then, lowering them down, cut off the gullet at the throat and lay them on a table to be cleared from the fat while warm. The liver may now be disengaged, by working it off from its attachments next the kidneys, and then it is removed with the heart and lights (lungs), cutting off the windpipe at the throat. Finally wash out and wash off the carcass with cold water and let it hang to cool. Clean the intestines while they are still warm.

When the carcass is perfectly cold, it is ready for shipping or cutting up, and may be kept for many days in cold weather. When a hog is to be cut up, first lay it upon its back; cut off the head as shown in fig. 1; then, split the carcass cutting straight through the backbone from the tail to the neck with a cleaver and knife. It is best to saw the bone sometimes, especially if frozen. The leaf fat and kidney fat with the kidneys, (K), seen at fig. 2, are now taken out, using the knife only to loosen them from the skirt (P) and tearing them off towards the hams. Then take off the hams. Cut from the tail, and saw the small "Aitch" bone at the loin; then cut rounding to the flank so that they will need little trimming. Next take off the shoulders cutting straight across the side, as shown in fig. 1. Trim off the spare rib from the shoulder, cutting close to the ribs on the side, and straight to the end of the spines; this leaves a good portion of lean meat on the ribs. Loosen the tenderloin at the rear and tear it out. Then cut off the flank (H) and brisket (G) in one piece, and cut in two if desirable. The thick clear back fat (O) is now cut off from the rib-piece (E) and loin (F) which, left in one piece, are cut as needed for use fresh, or cut into two or more pieces at once. The cheeks (B) are removed from the pate (A) by a cut passing from

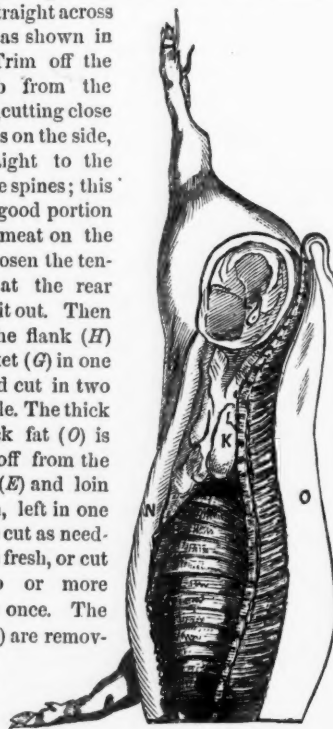


Fig. 2.—INSIDE OF CARCASS.

the mouth close under the eye (see fig. 1), and the jaw is cracked in the middle. Thus the cheeks are held together and are conveniently hung up. They are cured like hams and shoulders. Head cheese is made of the pate and trimmings. The feet (I, L) are cut off at the hocks and knees, as shown in fig. 1, and soured. In the preparation of this article we are indebted for practical hints to Th's. F. DeVoe, butcher, author, and historian.

PATIENCE.—Nothing teaches patience like Nature. You may go around and watch the opening buds from day to day, but each takes its own time, and you can not urge it on faster.

The Good Done by Farmers' Clubs.

There is probably not a single reader of the *American Agriculturist*, who does not believe that he knows something, or how to do something, better than anybody, in his neighborhood, at least. And we may say that this is true generally. There is no man who gives his mind to his work that does not come to entertain certain views or follow certain practices in which he excels other people. Once in a great while a man gets an idea which may be worth "patenting," and publishing to the world in this way; but usually the best thing one can do with a really good idea is to tell it to his neighbors; that, if it be an agricultural matter, the agriculture of the neighborhood may be benefited. This having of secrets, and "knowing enough to keep a good thing to one's self," is all very well, if a man gets a good idea out of his own head only by accident, and but a few in a lifetime; but for a man of average cleverness to hold on in this foolish way to his good thoughts and ways of doing things, is absurd. We think where one good idea is found there are "plenty more where that came from," and if it was the last idea we ever expected to have, we would act on that principle. Now, consider what an advantage the farming of a neighborhood would gain if all the thinking farmers should make common property of their choice thoughts. This is just what a farmers' club is good for—to collect the experiences of all, and the results of the reading of all, and have them brought together for discussion; to collect and distribute choice seeds, grafts, etc.; to try new implements, and thus decide upon the merits of each, once for all. In the same way varieties of grain or other crops may be tested to ascertain their value, samples being given to one or more members of the club, who should report the results, and preserve seed for distribution, if worthy. We have pleasant evidence now and then of successful farmers' clubs in various parts of the country, and would be glad to hear more frequently. The Beverly (Ill.) farmers' club, for instance, was formed in November 1860. It subscribes for a number of agricultural journals, holds weekly meetings, distributes seeds and plants, etc. Its Corresponding Secretary, through his correspondence with agricultural societies and farmers' clubs, secures many new and valuable documents and seeds. He writes to the *American Agriculturist* thus: "Some of the originators of this society came to this part of the country when it was an unbroken prairie, covered with luxuriant grass, and glowing with numerous and beautiful flowers. It has been the practice of this society to hold (at the appropriate seasons) fruit shows, flower shows, and molasses shows. At these shows our rare and beautiful flowers, choice fruit, and samples of excellent sorghum syrup manufactured in the neighborhood, have been displayed. We anticipate that the meetings the coming winter will be very interesting. Wool raising, flax growing, stock raising, and agricultural education, a subject which has been considered before—all important questions—will be discussed." There ought to be such a club in every school district in the United States, even in the cities. There would be plenty to talk about. See the "Constitution of a Farmers Club" on page 287 of the October *Agriculturist*.

The Persians, as ancient writers inform us, used to teach their sons to ride, pay their debts, and to tell the truth. That was a long time ago.



Design for a Weather Vane.

People are often at a loss to find a pretty pattern for this useful as well as ornamental article. We give an engraving of a very tasteful one. The "fly" is of tin, shaped and painted like a flag fluttering in the wind, and of any colors usual to little flags. It is fastened upon an iron rod, (or wooden staff if the size be great) and this is attached to a cylinder of brass which moves loosely upon the pole, and is supported by a ring that is fast to the pole. At its lower end the rod to which the fly is attached, is stayed to the pole by means of a loose ring and wire. The top of the pole may be protected by a ferule or cap of any kind. A star and crescent may be constructed by any good tinsmith.

Humbugs—Immense Sums Saved.

During the past five years, this journal has exposed about two hundred swindling schemes. We have *positive evidence* showing how and where these exposures have saved to the country from a million to a million and a half dollars, and there is little doubt that the real saving has been more than ten millions! For example, one operator had distributed 1,200,000 pamphlets by mail through the country, describing a humbug seed in a very taking manner, and so well assured was he of success, that he contracted for 100,000 seed bags, for each of which he expected to receive \$3. Just as the sale began vigorously, the scheme was shown up in the *American Agriculturist*, which goes to nearly every town and Post Office in the United States and Territories, and to the greater part of the British Provinces. Some one in each neighborhood was thus set on guard, and he communicated with his neighbors. The result was, the swindler took only the 13,000 bags already made, and did not dispose of all of these. He actually estimated his loss by the *Agriculturist* at over \$200,000, which was of course saved to the country, direct, to say nothing of the expense of freight, loss of time, labor, and use of soil, had the seeds been purchased, which would have been three or four times as much more. Another operator threatened to sue the Publisher for \$40,000 lost to him by having his scheme exposed. He was invited to "go ahead." He has contented himself, however, with dogging our steps, and with somewhat extended efforts to destroy the reputation of this paper, which by the way has crossed his track two or three times since, just as he started out on a new swindling enterprise. We could particularize many other illustrations. The fact is, the exposures and warnings in this journal have so opened the eyes of the people at large, and made them so suspicious of a certain class of circulars and advertisements, that during a year or two past we have had little occasion to go into particular details. Lotteries, lottery and chance schemes, mining companies, etc., are still in vogue, and catch enough of the unreading class to do a

moderately prosperous business, but we shall soon root out even these—as soon as we can get this paper into every family where it ought to go. The trouble is, that many of those who most need its teachings and warnings, are the very last to take it. But even such persons are benefited by the general information diffused and the public opinion created. The above is only a single item in the work of the *Agriculturist*, a *negative* work intended to save money, time, and annoyance—without taking into account the *positive* useful information given in regard to the work of the Farm, Garden, and Household.

THE OTHER SIDE.—During the past five years the circulation of the *Agriculturist* has ranged from 50,000 up to 100,000 (now), or five million copies in all, and these have cost the country about \$350,000 all told, in sums of 80 cents to \$1 for each subscriber, annually. So much only is to be set off against the millions the paper has saved negatively, and the untold millions it has positively added to the wealth and comfort of its readers. One can now scarcely go into a village in the country where there are not one or more gardens neatly laid out and supplied with necessities and luxuries that have sprung up from the influence of the *Agriculturist*.

OUR PAY.—The paper, while meeting its own expenses, has cost an immense amount of labor, thought and care. But we have stored up a rich treasure of satisfaction, and shall keep on in the old way. If we can save the people so many millions of hard earned dollars which would otherwise go to support vagabond sharpers, and if we can do something towards bettering the condition of our race, something to make their labors more effective, to make their homes more attractive, and their hearts better, we shall die rich, even should we leave behind no more gilded dust of our own than constituted the entire wealth of the Jewish woman.—O. J.

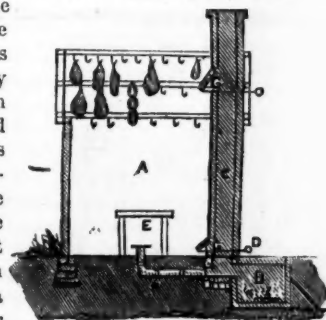
"Sheep—Grub in the Head."

A correspondent of the *American Agriculturist* "A. P. J.," of Grant Co., Wis., differs essentially from other writers on this subject. However, he tells simply what he has seen and experienced, and if it topples over old theories, all the better. Theories that can not stand contact with facts are not worth much. Mr. J. writes: "In the August number I see an article with the above title, which contains the quite common notion that the egg is deposited by the fly in the nose, and that as soon as hatched, it ascends, etc. Now, watch the gadfly carefully, and you will see it light on the sheep just above and a little forward of the eye. At that place it is an easy matter to stick a common pin through the pelt and thin bone into a cavity in the head. This cavity is, beyond any possibility of mistake, the breeding place for the grub, for from a single cavity, I have frequently taken six to twelve grubs, in all stages, from near maturity to so imperfect a state as to be entirely incapable of moving themselves about.—About 15 years ago, while living in Wyoming Co., N. Y., I lost about one sheep in ten by the "grub." The heads of nearly all were dissected, and in every one grubs were in the brain—in some cases half a dozen of them—while from ten to fifteen remained in the cavities near the eyes. About the same proportion of sheep died all through the neighborhood. At the next shearing I bedaubed the forehead (face) of each sheep with tar, and about the middle of July renewed it. The result was, that I did not lose one sheep out of eighty the next

spring. Others who tarred the noses lost many. The above statements are facts. I have no theory to defend. I could never catch the fly that plagues the sheep from the middle of July until about the last of August, and do not know whether or not it has a borer, like the seventeen-year locust, through which to deposit its eggs. But this I do know, there is a cavity forward of the sheep's eyes, as large as the end of one's thumb, where the bone covering is not thicker than the paper I am writing on, and that the grub is found in this cavity as late as in March, in such an imperfect state as to be unable to move itself up or down, or out. It would be a good thing if farmers as well as others had fewer theories and more eyes for facts."

A Convenient Smoke-house.

A good smoke-house should be found upon every farm, large or small, and there are many other families besides those of farmers which would equally be benefited by one. The object is to be able to expose meats to the action of creosote and the empyreumatic vapors resulting from the imperfect combustion of wood, etc. The peculiar taste of smoked meat is given by the creosote, which is also the preservative principle, but sundry flavors, agreeable to those who like them, are also imparted by other substances in the smoke. All that is necessary for a smoke-house, is a room, from the size of a barrel to that of a barn, which can be filled with smoke and shut up tight, with conveniences for suspending the articles to be smoked. In common smoke-houses the fire is made on a stone slab in the middle of the floor. In others a pit is dug, say a foot deep, in the ground and here the fire is placed; sometimes a stone slab covers the fire at the height of a common table. This is a good plan for all kinds of



INTERIOR OF SMOKE HOUSE.

smoke-houses, as it diffuses the rising smoke, and prevents the direct heat of the fire affecting the meats hanging immediately above. Another plan, engraved above, is a little more expensive, but if properly made, highly approved. The house we show a section of, is 8 feet square, and built of brick. If of wood it should be plastered on the inside. It has a chimney, B, with an eight inch flue; a fire place, C, is on the outside below the level of the floor. From this a flue, F, is carried under the chimney into the middle of the floor where it opens under a stone table, E. In kindling the fire a valve is drawn directing the draft up the chimney. The green chips or cobs are thrown on, and the valve then placed so as to throw the smoke into the house. Both in the upper and lower parts of the chimney there are also openings, G, closed by valves regulated from the outside. The door has to be made to shut very close, and all parts of the building must be as tight as possible. The advantage of such a house as this over others is, that the smoke is cooled considerably before it is admitted; no ashes rise with the smoke; meats may be kept in it the year round, and not very much smoked either, for the smoking may be occasionally renewed, so as to keep the flies

away. The table placed in the center will be found a great convenience in any smoke-house.

The Purple-top Strap-leaf Turnip.

A farmer speaking of this variety, a few days since, in the office of the *Agriculturist*, said:—"They are so uniformly good, in fact so nearly all that we can ask, that there is very little inducement for farmers in this part of the country to experiment with the new English sorts, except the new Swedes and Rutabagas." In addition to this, we quote the testimony of Mr. Harris, of the Genesee Farmer, who writes:

"The Strap-leaf Turnip is certainly a splendid variety to sow late in the season, after early potatoes, &c. I sowed them this year at different times in August. The first sown are now (October 11) quite large. George brought in one this morning that was twenty-two inches in circumference. I had the greatest difficulty in persuading the German women to hoe them thin enough. They could not be persuaded to cut them out more than four or five inches apart, and in a week after I made them go over them again and take out every other one. It is a great mistake to leave them too thick—and it is certainly very absurd to leave them without hoeing. One great advantage in raising turnips is, that they require good culture. This they must have; it is useless to try to raise them without; but if the land is in good condition, and the turnips are singled out and the land well hoed, there is no crop which grows so rapidly or which will please the farmer so much. Next to underdraining, the raising of a good crop of turnips is one of the most fascinating employments connected with farming."

What is Oil Cake, or Oil Meal?

This inquiry comes from a dairy woman, who wants to employ every means to increase the butter yield of her herd. The common vegetable oils are, most of them, expressed from seeds. Hemp seed yields an oil, so do cotton seed, grape seed, poppy seed, etc. Linseed oil comes from flax, and castor oil from the castor bean. These oils are extracted from the raw seeds, or after roasting or heating them, by subjecting them to heavy pressure by hydraulic presses. The residue after the oil is extracted, is usually in the form of an oblong or circular cake, two or three inches or more in thickness, and quite tough and hard. The residue of the castor bean easily breaks up, so that it is not found in market in the form of a cake, but the beans or parts of beans are pressed flat, and stick together very feebly. This is called "castor pomace;" it is never fed to animals, but is highly valued as a manure. Since the outbreak of the rebellion, but little cotton seed cake has been in market. This is prepared from the *hulled* seed, and the more perfectly hulled, the better the character of the cake. It usually comes in the form of meal, which is simply the cake ground. The good qualities are light colored, but darker than Indian meal; the meal from poorly hulled seed shows an abundance of black specks, and this is deleterious if fed to stock. Rape cake is from the seed of a plant of the cabbage kind, which is raised for illuminating oil. It is seldom seen in this country. The residue from hemp seed after pressing out the oil is valuable for manure.

Linseed (flax seed) cake, however, is always meant when "oil cake" is mentioned. This comes both in the form of cake and meal, "oil-meal" in market, and immense quantities are

exported from this country to Great Britain annually. It is usually fed upon cut feed to milch cows or fattening animals, allowing from one-quarter pound to six pounds per head—the latter quantity being given only to full-grown heaves. All animals must be gradually accustomed to it, or it will have very undesirable purgative effects. It should always be used in connection with coarse fodder—hay, straw or stalks. When only the cake can be obtained, it may be broken up, soaked or cooked till it becomes a mucilaginous broth, salted a little, and sprinkled on the fodder. Great care should be exercised in feeding it to calves. The same remarks are applicable to cotton seed meal. Good linseed cake contains about 13 per cent. of oil; cotton seed cake, 16½; of albuminous (muscle-forming) substances, linseed cake, 28½; cotton seed cake, 41½. The amount of nitrogen in the former is 4½ per cent.; in the latter over 7. Mucilaginous matters, gum and sugar, in linseed cake greatly exceed those in cotton cake; but though valuable for food, the great value of these articles depends upon the proportion of oily and of nitrogenous, that is, albuminous substances. The amount of phosphoric acid in the ash is also quite considerable. This, with a large part of the nitrogen, appears in the manure, and greatly increases its value, especially if from full grown fattening animals.

The Diminutive Cattle of Brittany.

Little cows of this breed are becoming quite fashionable in England, and some have been imported here. Some inquiries addressed to the *American Agriculturist* are answered by an extract from Mr. Flint's report of the International Exhibition of 1861: "The little Bretagne cows pleased me exceedingly. Standing only about three feet high on their legs—the most fashionable height—most black and white, now and then, but rarely, a red and white; they are as docile as kittens, and look pretty enough to become the kitchen pet of the hard pressed mountain or hillside farmer, with pastures too short for a grosser animal. Ten pounds of hay will suffice for their limited wants for twenty-four hours, and they would evidently fill a seven quart pail as quick and long as any other cow. Those pretty cows will often hold out in milk, so the herdsmen said, from fifteen to eighteen months after calving, and often begin with the first calf with six or seven quarts a day. The horn is fine, not unlike the Jerseys, but smaller and tapering off gradually, and the escutcheon or milk marks of Guenon generally very good. Good cows are held from sixty to seventy dollars a head, a fancy price of course, but I am not sure that they would not pay six per cent. on the investment as well as most 'fancy stocks'."—It would be an expensive matter to import many at the present rates of exchange, and when good cows can be bought for \$50 to \$80, and are worth as much as they cost for beef.

Rules for Shoeing Horses.

Most of our farriers shoe without exercising any judgment, trying only to make a well appearing job. A London veterinary surgeon gives the following rules for shoeing horses: 1. After having taken off the old shoe, shorten the toe, and remove all the dead and loose parts of the hoof. Do not cut the sole or pare the frog, unless when the foot has received an injury from a nail or otherwise, when it must be cut out. 2. Let the shoe be of equal thickness,

or rather thinner at the heel. The ground and foot surface should be perfectly level. The shoe should be light on the heel. Too many nails are objectionable, and these should be kept as far as possible from the heels. 3. For the hind feet there is no objection to calkins, though they are of doubtful benefit. Horses travel much better without them. The hind shoes are made thicker at the toes than at the quarters; the nails also can be put closer to the heels without causing inconvenience. 4. Side clips should be avoided; they destroy the hoof; this is the case when the nails are too close together. The feet should never be rasped, as it destroys the enamel of the hoofs, renders them brittle, and causes sandcrack and lameness.

Practical Jokes Played by a Horse.

Though many curious tricks and mischievous but harmless capers have been played by horses within our own knowledge, yet it is hard to give credence to the following anecdote from an English paper: "There was (some years ago) a very fine horse in the possession of Henry Meux & Co., the eminent brewers, used as a dray horse, but so tractable that he was left sometimes without any restraint to walk about the yard, and return to the stable, according to his fancy. In the yard there were also a few pigs of peculiar breed, fed on grain and corn, and to these pigs the horse had evidently an insuperable objection. There was a deep trough in the yard holding water for the horses, where this horse went often taking his mouth full of corn. When he reached the trough, he let the corn fall near it on the ground, and when the young swine approached it (for the old ones kept aloof), he would suddenly seize one of them by the tail, pop him into the trough, and then caper about the yard, seemingly delighted with the frolic. The noise of the pig soon brought the men to his assistance, who knew from experience what was the matter, while the horse indulged in all sorts of antics, to show his glee, and then returned quietly to his stable."

Tools, Wagons, etc.—"Taking Time by the Forelock."

There are people enough who delay buying tools, and having old ones repaired, until just when they want to use them, so no reader of the *Agriculturist* need feel obliged to be of the number. The counsels of the Genesee Farmer are good on this point, so we copy them:

"I was so annoyed last spring by the delays in getting plows, implements, &c., ready for work, that I am determined to have every tool, machine, cultivator, plow, &c., put in repair this fall. I have already commenced. It is just the work for a rainy day. I find it a great convenience to have on hand bolts and screws of various sizes. With these, and proper tools, an ordinary man can repair many things as well as a blacksmith. It would be a great saving in the long run if we were more careful in cleaning and painting wagons, carts, machines, cultivators, plows, etc., at this season of the year, before they are put away for the winter. Paint is now expensive, but so are implements, and they would undoubtedly last much longer, and certainly look none the worse, I admire the farmer who keeps things snug, with every thing in its place. Nothing looks worse, or is more unprofitable, than a slipshod style of farming. But it requires constant care

to keep things in their places. I try my best to do so, but cannot congratulate myself on the result. I make spasmodic efforts at straightening up, but in a week things are at loose ends again. I proposed to my men that every time they left a tool out of its place they should pay 10 cents, and every time I transgressed in the same way I would pay a quarter, the sum to be divided among the men on the farm at the end of the season. But it is difficult to carry it out. The better way is to make a man who leaves a thing go and get it after he is through work."

Cultivation of the Pea-nut or Ground-pea. (*Arachis hypogaea*.)

The well-known Pea-nut, which is consumed in such quantities at the North, is a native of South America, and perhaps of Africa also. It grows and gives good crops in the warmer States, and will mature in New Jersey and even further north; but whether it will give a profitable yield in these cooler localities we have no statistics to show. In the south of France it is grown for its oil, of which one bushel of nuts is said to yield a gallon. Mr. A. Berry, of Cincinnati, O., who has grown them in the South, sends the following notes on their culture: "The plant is an annual, and its branches extend horizontally on the ground from one to two-and-a-half feet in every direction. Its yellow blossom is on a slender stem, which, after the germ is fertilized, grows downward, and places the embryo pea two or three inches beneath the surface of the ground. Hence the necessity of a loose soil for a good crop. Land a little sandy or loamy, and fertile, is best. It should be very deeply plowed and mellow, as then the roots run deeply in search of nutriment. The rows may be three or four feet apart, and on ridges thrown up by the plow as for sweet potatoes, or on level ground, which is usually preferable, especially in a dry season. The seed, which should be of good size, comes up better if the husk is removed before planting; it may be placed two in a hill, and covered about two inches deep, the hills a foot distant from each other, about the time for planting corn. After they are up, thin to one in a hill, and transplant where missing. The cultivation then necessary is to keep the surface of the ground mellow, slightly hilling it about the plant, and free from grass or weeds. The early cultivation may be mostly by horse power, but the later working must be with the hand hoe. I have raised the ground pea in Mississippi with but little greater care than is required by a crop of corn. They continue to grow until frost, and yield, under favorable circumstances, from fifty to one hundred and fifty bushels per acre. When dug they should be spread to dry under a roof, and those for planting kept from freezing. If frozen in the ground they are not injured, but out of it they thaw so suddenly as usually to prevent germination. A stout four pronged fork is useful in digging; and they nearly all come up on the roots. They contain a large proportion of oil, said to be preferable to that from the olive for table use; this renders them excellent for fattening hogs. It is the opinion of some good planters that it pays to grow them for swine. The best manner of preparing the pea-nuts for eating, is to roast them in hot ashes, or better in embers well covered with ashes, to exclude air and keep from burning. Though very palatable, they are not easily digested, owing to their large quantity of oil.

The Grape Mania.

At the present time the interest in the grape question amounts almost to a mania. Not only are the horticultural and agricultural papers engaged in its discussion, but the daily papers join in it, and the editor of one of them, Mr. Greeley, sets grape growers in a fever by the offer of a prize. The peculiar awarding of this prize by a Committee of the American Institute has been the cause of much comment in private and in public. We are receiving very many letters about grape culture from all parts of the country. Here is one from H. P. Byram, Esq., well known as the former editor of the Valley Farmer, and as a writer on Horticulture, in which he discusses the merits of

THE IONA AND ISRAELLA GRAPES.

To the Editor of the American Agriculturist.

In your notes on grapes, in the *Agriculturist* for November, in speaking of the Iona, you allude to the "poor and badly grown specimens" exhibited in New York, compared with those that you had seen grown by other persons in different localities. Those exhibited in New York, were probably grown by Dr. C. W. Grant, who raised both the new seedlings, Iona and Israella. The question has since been asked me, why these grapes compared so unfavorably with those grown and exhibited by others. I am unable to give a satisfactory answer to the question. Dr. Grant is one of the most intelligent and thorough cultivators in the country. His ground where both the Iona and Israella grapes were grown, has been trenched two or three feet deep, and thoroughly manured the entire depth with well prepared compost, and the subsequent cultivation has been careful and thorough; and, moreover, every good bearing vine, I believe, of the Iona, as well as the Israella, the past season, was subjected to a *forcing process* that must not only have greatly improved the quality and appearance of the fruit, but also hastened the ripening several weeks. The Iona has fruited in the hands of certain amateur cultivators in various parts of the country for several years past, and the numerous specimens that have been exhibited to the public have established the superior character of the fruit. That it is one of the best grapes that we have, is beyond question. Not so, however, with the Israella; though a seedling of the same age of the Iona, it has been but little propagated, and the public knew but little of it, except through "the very persistent puffing" it has received from its proprietor in his various catalogues and advertisements. Besides claiming for it superior excellence, which I have not been able to discover, he says: "It is a large black grape, ripening one week before the Iona, and is the earliest black grape that is large, excellent and hardy." And on page 2 of catalogue No. 3 for the present season, he says: "*Its time of ripening is earliest of all—before even the Hartford Prolific.*" And again on the same page he says: "*While I write, August 20, the Israella is intensely black, and may be said to be fully ripe for market.*" Now, from these statements and many other similar ones from the same source, the public are led to believe that they are not only purchasing a variety of great excellence, but of extreme earliness, when grown in the usual manner in the open air. It is far below the standard claimed for it in point of quality, and its earliness in ripening was secured by means not understood by the thousands who have purchased and planted the vines. Now, while very large sums of money

have been, and are being paid for the vines of these new grapes, I deem it due, as an act of simple justice to the public, to describe the means employed to force these fruits into early ripening. Early in the season, in front of each good bearing vine, of both the Israella and the Iona, was first placed a large glazed sash, and then on the back or north side, and twelve or fifteen inches from the vines, was erected a large wooden screen or wall to break off the wind on the one side, and to reflect the heat of the sun upon the vine and fruit on the other. Now every intelligent horticulturist knows what great advantages are secured by this simple arrangement, and which must hasten the ripening of the fruit two or three weeks. I state these facts from my own personal observation, and they were known to every intelligent person on the place at the time. I have received letters from several of the best cultivators in the country, who have fruited these grapes, and they all concur in placing their time of ripening several weeks later than that specified in the catalogues and advertisements of the proprietor. It would also be a matter of interest to the public to be informed by what skillful maneuvering the "Greeley prize" was secured to the Iona at the late exhibition of the American Institute. But as the Iona is a good grape, and no one was seriously injured thereby, I will now let that pass for the present.

Sag Harbor, Nov. 5, 1864.

H. P. BYRAM.

Grapes in Kentucky.

W. Brown, Esq., of Jessamine County, sends an interesting report of his grape experience, which we regret not to be able to publish in full; it contains a record of the thermometer, and is evidently prepared with much care. Mr. B.'s vineyard, consisting of 15,000 vines, is situated on very elevated and naturally drained land, and is planted with the Catawba, Diana, Delaware and Isabella. From his record of temperatures, it appears that during the winter of 1863-64 there were thirteen days and nights during which the mercury was below freezing, and that during seven of these it ranged below zero. The vines had no protection at all, and were exposed to a cold which killed all the blossom buds and a portion of the wood of a peach orchard near by. In the vineyard the Delawares had not a bud hurt, and bore well. The Catawba was somewhat injured, but not sufficiently to prevent a fine crop of fruit. Isabella, about the same as the Catawba, The Diana had most of the buds killed, and bore very little fruit. Time of ripening with him: Delaware, Aug 25; Catawba, Sept. 20; Diana, Sept. 15. Mr. B. likes the Delaware very much, but finds it a slow grower. In relation to the Catawba in his locality, he says: "I have yet to see the grape that I think equal to the Catawba as it grows here, for either wine or table use. I am aware that many who never tasted a perfect Catawba will think I show poor taste by this remark after eating the Delaware. I do not know any quality possessed by the grape as a table fruit which could improve Catawba as it ripens with us. I have been familiar with its cultivation here for many years past, and consider the crop as certain as Indian corn. I have never seen it mildew in Kentucky, and this year I do not remember that I saw a rotten grape in this county. In unfavorable seasons it is attacked by the rot, but never to such an extent as to produce anything like a serious failure of the crop.



A WINTER JOURNEY IN 1830. — Engraved for the American Agriculturist.

Language cannot give so strong a statement as we present in these two engravings of the contrast between the modes of traveling of a few years since, and of to-day. The first severe storm leaving the snow piled in drifts in every

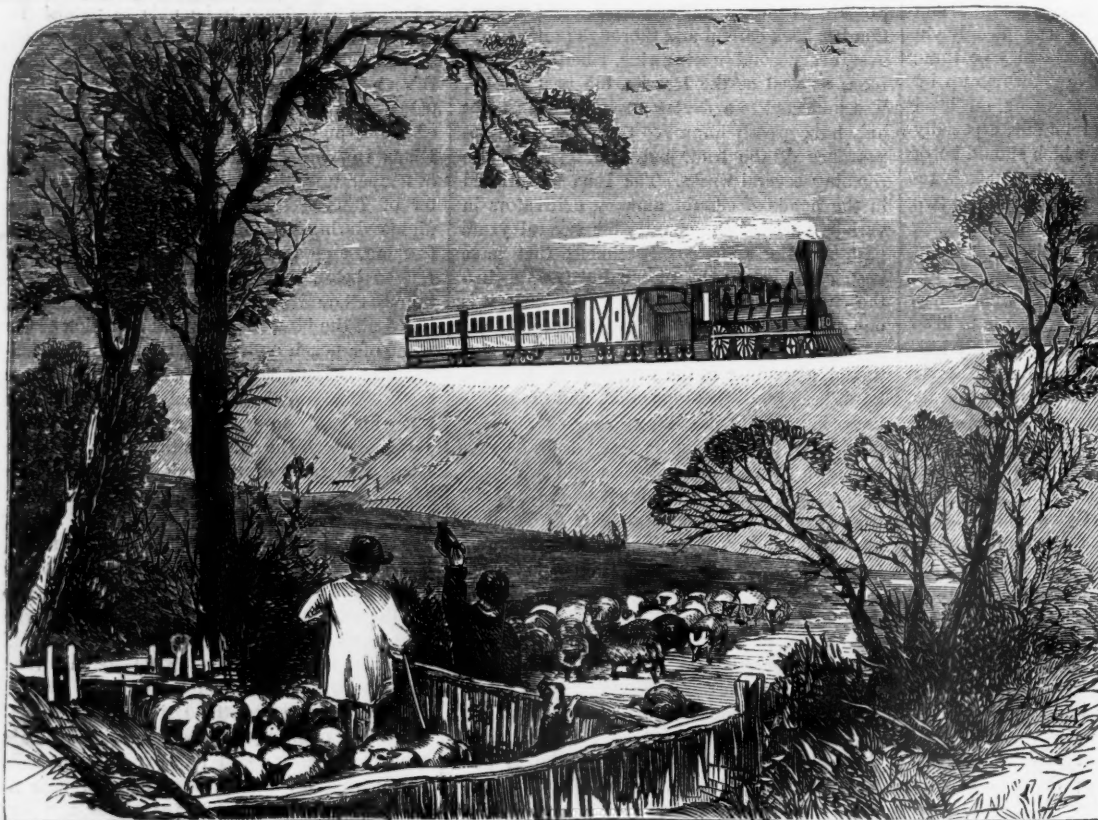
idays, the horses toiled through the drifts, sweating and balking, and needed all the persuasions that the driver could apply to bring the snow clogged wheels through to the journey's end. Within, shivering passengers tried

anticipate that similar progress may be made in the field, to that made upon the road within 30 years? Progress is the spirit of the age, and it is impossible to place limits to the achievements of human skill and invention, in mechanical things.

Happy are the people who are in the vanguard of this noble advance. Thus far America can justly claim this proud pre-eminence.

To Save Seed Corn.

If it has not been done already, select the largest, ripest, and most perfect ears at once. In husking, leave on a few of the inner husks, braid the chosen ears together, and hang them up on a pole or rope in some dry and airy place, where they will get seasoned through, cob and all. It is the mistake of some to throw their corn at husking time into a heap or bin, leaving it there a long time before selecting their seed for next year. The consequence often is, that partial fermentation sets in, and the germ of the seed is so much injured that it fails



A WINTER JOURNEY IN 1864. — Engraved for the American Agriculturist.

corner and under every bank, and the thermometer down to zero, perhaps, frequently caught the mail "stages" on wheels, and at the wrong end of the line. With heavy loads of boys and girls (of all ages) on their way home for the hol-

to keep each other warm and sociable, and it went strongly against good nature to turn out knee deep in the snow to break road or help shove coach and horses both through some big drift. Yet this was common experience; no-

to grow when planted. And then, blame is thrown upon Providence, or the worms, or the crows. Corn which has been so heated will answer tolerably well for grinding, but for planting it is a very uncertain dependence.

The Ornamental Varieties of Kale.

One would hardly suppose that any variety of the cabbage could be classed with the ornamental plants. Yet such is the fact: some of the

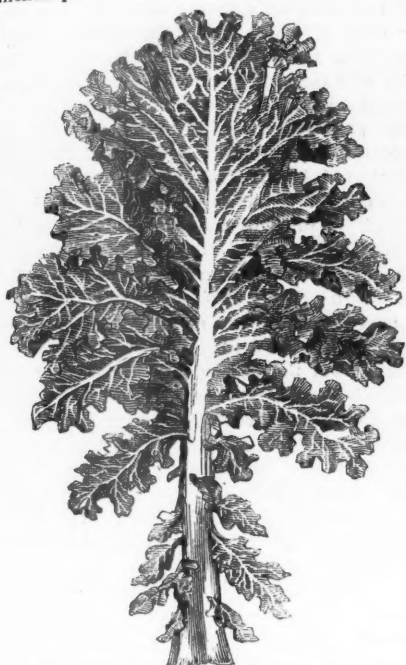


Fig. 1.—SMALL LEAF OF GREEN AND WHITE KALE. new kales are really beautiful. In England, the common red kale has been used for a long time for the winter ornamentation of the gardens, it being planted with low evergreens and other plants which will endure their mild winters, to produce pleasing effects of color when seen at a distance. Mr. T. S. Gold, of Litchfield Co.,

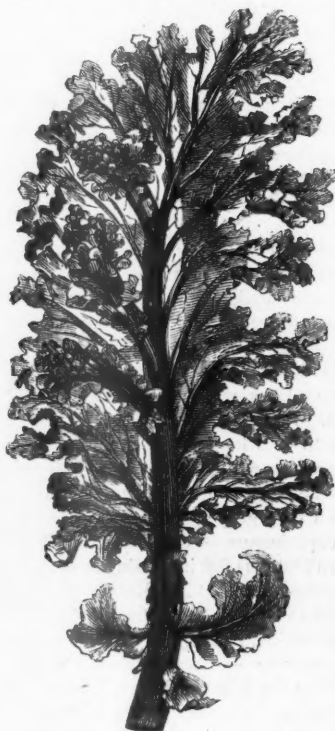


Fig. 2.—SMALL LEAF OF GREEN AND PURPLE KALE. Ct., sent to our table specimens of variegated kale which are beautiful not only for their form but for their elegant coloring. It is almost impossible to represent in black and white those plants which depend upon color for their beauty, yet we have attempted to give in the engravings

some idea of two specimens of this kale. Fig. 1 is a small leaf of the variety which presents the most marked contrasts of color, having a pure white net-work running through a leaf of lively green. In the engraving the green portion of the leaf is represented by the shading. The variety shown in fig. 2, is more beautiful in shape. The leaves present a most delicately frilled green edge, while the central portion is of a fine rose purple, and the two colors blend into one another in the most pleasing manner. What is most striking about this specimen is the fact, which we have attempted to show in the engraving, that some of the leaves have leaf bearing branches starting from their mid-ribs. In the *Agriculturist* for October an illustration was given of young plants starting from a leaf, and now we have the curious phenomenon of the branch growing upon a leaf. This last case is explained by supposing that what would have otherwise been distinct, upright stalks, have in the development of the leaf become so united with, and so to speak, grafted into it, that they were carried along with the leaf and appear to be produced by it. The seeds of these varieties are sold by seedsmen under the name of "Improved Garnishing Kale."

The Honey Locust for Hedges.

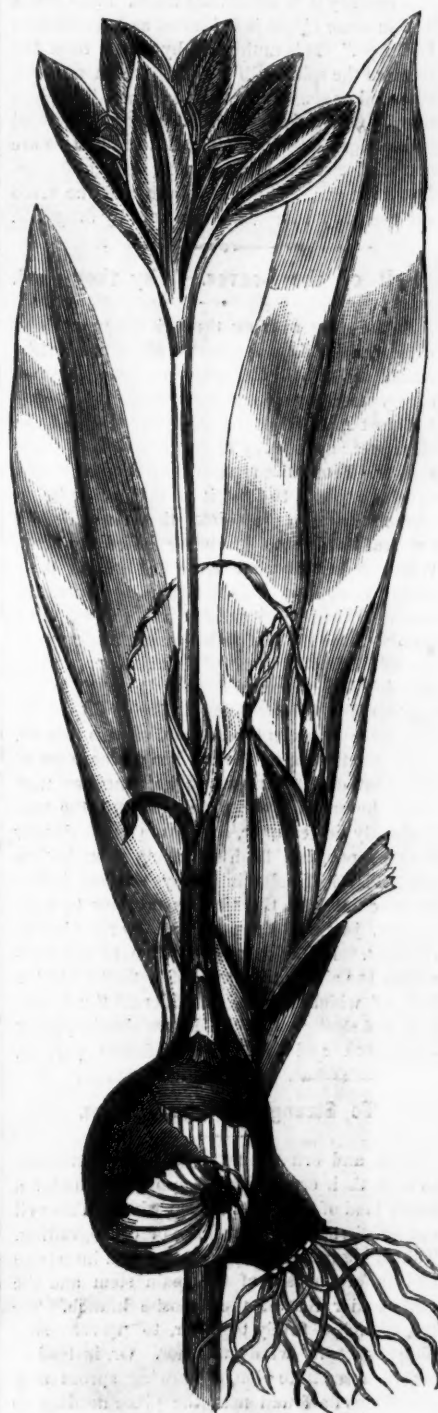
This tree, which is frequently called the Three-thorned Acacia, is the *Gleditsia triacanthos* of botanists, and though a native of the South, is found growing wild as far north as Pennsylvania and Illinois. In favorable situations it forms a large tree, and is frequently cultivated for ornament, on account of its graceful outline and its light feather-like foliage. The flowers are not conspicuous, but the fruit is very much so. This consists of long thin wavy pods, which have been aptly described as looking like apple parings. It produces upon the trunk and branches clusters of strong, large and sharp branching thorns. As a hedge plant it has been in use for a long time, with a variable reputation, but the general verdict is now in its favor. Former failures are attributable to the want of proper treatment of the hedge during its early growth. The plants are readily raised from seed, which may be collected from fruiting trees, or be had at the seed stores. It is usually advised to expose the seeds mixed with earth to winter freezing, or to scald them and keep them in a warm place, before sowing. This may be a safe precaution with old seeds, but we have seen a plantation made last spring with seeds sown without any preparation, and they seem to have come up as regularly as beans. The young plants may be set from two to three feet apart in the hedge row, and after growing a year they should be cut back within two inches of the ground. This will cause a dense shrubby growth, which will need to be brought into shape in the same manner as with other deciduous hedges. The clipping is done in June and September, but any shoot tending to make a strong growth must be removed whenever it appears. A few years' severe cutting will bring this tree into a most excellent hedge. We are not able to state the precise northern limit at which the Honey Locust proves hardy, but all through central New York and Massachusetts it flourishes and stands the winter quite well.

Show may easily be purchased; but happiness is a home-made article which all may have.

For every vice or virtue a man exhibits, he generally gets credit or discredit for a whole brood

The Meadow Saffron.—(*Colchicum autumnale*.)

This is one of the old-fashioned flowers that has nearly disappeared from gardens, but which presents so many points of interest, and is withal so pretty, that we think it deserves to retain a place. It flowers in September and October, and its fresh and spring-like flowers are in



MEADOW SAFFRON.

marked contrast with the languishing condition of most other plants at that season. The flowers appear without leaves. The figure shows one of the bulbs at flowering time. The pistil extends down into the bulb, and the ovary, the part which will become the seed pod, is concealed there several inches below the surface. After flowering, all above-ground traces of the plant are lost sight of until the following spring, when the leaves appear and with them the seed vessels,

which are the result of the previous autumn's flowering. The leaves die and disappear after the seeds have ripened, and nothing is seen of the plant until the flowering time again returns. The leaves and seed pods, as they appear in spring, are shown in the engraving behind the flowering plant. The *Colchicum* is a native of Europe, where it is called Meadow Saffron; in this country it is sometimes called Fall-Crocus and in some places it is known as "Youth and Old Age." It is multiplied by offsets from the corm, as the solid bulb is called, which are best removed as soon as the leaves wither. The plant may be grown from seed, but it requires several years to get large enough to flower. There are several floriste' varieties, among them a double-flowering one. The dried bulb and the seeds are used in medicine and are kept by druggists.

Fall of the Leaves.—Why they Fall.

As we were walking through the grounds of a friend a few days ago, he pointed out what he considered a singular phenomenon: Of two cherry trees, standing near each other, one had lost most of its leaves, while those of the other were apparently as green and flourishing as ever. From the remark that they had been equally exposed to frost, it is evident that he, in common with others, thinks that the falling of the leaf is due to its being killed by frost. While it is true that some kinds hold their foliage until frost kills them, this is not the case with the majority of our hardy trees. As a general thing the leaf falls because it is ripe; it has fulfilled the objects of its existence, and in so doing obeys a natural law. In many leaves this fall is anticipated, and a distinct line of demarcation between the leaf and stem is formed, while the tissues of the surface of the stem at the point of attachment are hardened, so that when the union is completely severed, the scar is already healed over, and there is no danger from evaporation from the many wounds thus left. The leaf falls in many seasons before frosts come, and the time is peculiar to each variety, just as is the period of the ripening of the fruit. In the case of the two cherry trees referred to above, they were of distinct sorts, the fruit of which matured at different times, and it is not strange that the leaves should perfect their work and fall off at different periods.

To Strengthen Fruit Trees.

Fruit and ornamental trees will sometimes so form their crotches as to split down under a heavy load of fruit or in violent wind. This evil can be obviated by inarching or cross-grafting. Take a vigorous shoot, in spring, and insert one end under the bark of the main stem and the other under that of the opposite branch. Tie the branches firmly together, to prevent slipping apart in windy weather. Or, instead of taking a separate cion, a growing sprout may sometimes be found near the place needing to be strengthened, and by cutting off the top it may be inserted under the bark of the opposite limb. These braces may be put in every few years, as the tree needs them. Such "Siamesed" trees are quite interesting objects to look at.

Clouds never send down to ask the grass and plants how much watering they need; they rain for the relief of their own full bosoms.

Better to distribute the fruits of one's own industry, than to reap the benefit of other people's.



Fig. 1.—How the Root is cut—2, Graft—3, Graft Inserted.

Something more about Root Grafting.

In the *Agriculturist* of last January the usual method of root grafting was described and illustrated. Our correspondent "A. W. C.," Burlington, Iowa, who propagates largely in this way, sends a detailed account of his method of grafting. As this differs in some points from the process common at the East, engravings are given to show his manner of working. In the first place, instead of making the whip-graft, as shown in the January article, he practises a sort of side-grafting. Fig. 1, shows the root as prepared for the introduction of the graft. It

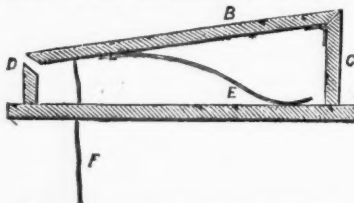


Fig. 4.—CLAMP FOR HOLDING ROOTS.

has a diagonal cut of 1 inch to 1½ inches in length. The grafts, fig. 2, are cut in the usual form, being about 2½ inches long, with a smooth wedge at the base, taking care to have a bud about ½ the way down the wedge, as shown in the figure. Fig. 3, shows the graft as inserted into the root. Where much grafting is to be done, Mr. C. finds it advantageous to use a clamp to hold the root, and to have several persons, each to perform a different part of the

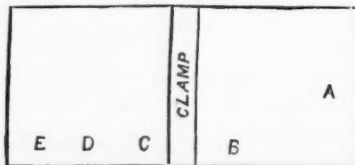


Fig. 5.—POSITIONS AT THE TABLE.

operation. A strong bench is made, 18 inches wide, 4 feet long, and of a height convenient to work at. The clamp, which is placed across the centre of this bench is shown in section in fig. 4. In the figure, A is the top of the bench; B is the movable jaw of the clamp; it is a piece of board 3 inches wide and hinged to an upright piece, C, which is 9 inches high. At D, is the fixed jaw of the clamp, 3 inches high; the

upper edge of this as well as the opposing portion of the movable jaw are beveled to meet nicely, and are covered with India-rubber to prevent bruising the root. A spring, E, serves to open the clamp, and it is closed by means of the foot working a stirrup attached below to the cord, F, which passes through the top of the table. Fig. 5, is a plan of the top of the table with the clamp in the centre. The person who sits at A, prepares the grafts, and places them at B. The principal operator is seated in front of the clamp with the roots at C. He takes a root in his left hand with the top toward him, places it in the jaws of the clamp and secures it by pressing upon the stirrup with his foot. Then with the knife in the right hand, a cut is made like that in fig. 1, by pushing the knife with a sliding motion from him. The top is next cut off, and one of the prepared grafts is inserted, as in fig. 3. The root is now removed from the clamp and laid at the place marked D, on the table where another person ties the graft with coarse cotton yarn, by taking three or four turns around the juncture, and securing the end by throwing a loop over the cion. A knife is fixed in the table at E, for the convenience of cutting the string. The joints are afterward coated with grafting wax, melted sufficiently to apply with a brush. In this as in all other grafting, care must be taken that the bark of the cion and of the stock come in close contact. The grafted roots are to be preserved in damp sand or earth in the usual manner.

Wine Grapes and Wine.

The influence of climate upon plants is not yet sufficiently appreciated. When it is known that our common hemp produces in India a powerfully intoxicating resin—or "hasheesh"—which is never developed in temperate climates, it will not be surprising to learn that the same grape varies widely in its wine-making qualities in different localities, and that the diverse opinions expressed respecting the wine-making value of particular grapes are not due to the prejudices of the cultivators, but to real differences produced by climatic influences. In a wine grape we have to look for hardiness, good bearing, abundant juice, and above all a juice which contains sufficient grape sugar to produce wine. These are essentials, and after they are secured, our preferences as to flavor may be indulged. The *Catawba*, where it will perfect itself, is best known as a wine grape, but will doubtless be replaced by the *Delaware* in those places where the *Catawba* will not flourish. Here we have two grapes which are known to be wine producers, and with which all other sorts will be compared. It is expected from the character of the *Iona* that it will stand well as a wine grape, but we have not heard of direct experiments.—*Concord*, in the Middle and Western States, is fast increasing in estimation as a wine producer. At Mr. Knox's recent grape and wine exhibition, the *Concord* wine attracted great attention, it being of the character of a fine Bordeaux.—*Alvey*. This is a fruit much resembling the *Clinton*, vine a little tender, but bears well, and is highly prized in Missouri as a good wine grape.—*Taylor*, sometimes called "Bullitt," is very often spoken of as a grape of great promise. It has promised for several years, but we never saw it perform to the extent of producing a decent bunch.—*Oporto* bears an abundance of small bunches; is said to make a good wine, but the berries are lacking in juice.—*Franklin*. This is a small black grape

after the style of the Clinton, with a very high colored juice, and worth looking after, as the vine is very vigorous, hardy and productive.—*Oreveling*. Though not generally enumerated among the wine-producing varieties, we are disposed to think well of it, from the specimens of wine we have seen.—*Clinton* should be included in our list of wine grapes, as should the *Diana*, which, where it can be grown, is valued for the purpose of mixing with less highly flavored varieties for improving the flavor of the wine. These are notes of our observations on the wine grapes as we have seen them this season. We hope that growers will, for the present at least, turn their attention to supplying our markets with good and cheap fruit. When every body can buy good grapes at 10 cents per lb., it will be time enough to go into wine-making. Mr. J. H. Boving, Jr., of Fairfield County, O., states that an acre of Catawbas, three years planted, gave him grapes enough to produce 1,000 gallons of wine. Mr. B. preserves his grapes over winter by burying in the manner described on page 146 (*May Agriculturist*.) He recommends a mill for crushing grapes, which we cannot understand without a drawing. Mr. B. recommends that when the pressed grapes are put into a tub to ferment, the clear juice be drawn off from below, after the skins and pulp have risen, as he thinks this saves much labor and gives a finer product, than when juice and grapes are pressed together.

Unfruitful Grape Vines.

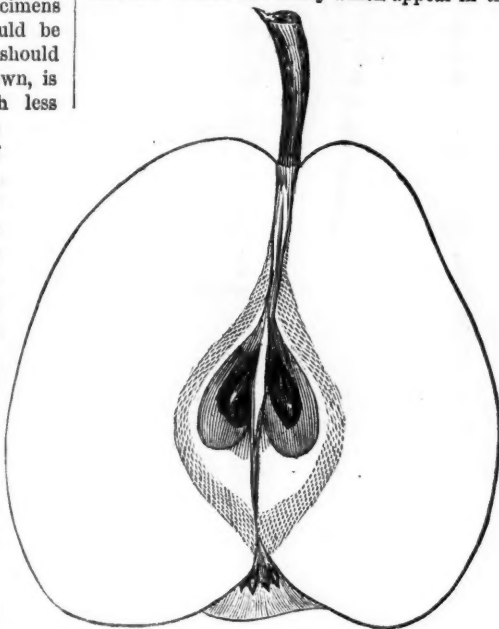
It very frequently happens that persons have thrifty vines which flower abundantly, but never bear fruit. Such vines, as they originate from seed, are usually valued by the owners, and they write to know what can be done to make them bear. The flowers of our native varieties of grape are often imperfect, and in their case it is not worth while to attempt to do anything with them. They should be replaced by a good sort or be cut down and grafted with some standard variety, in the manner described in the *Agriculturist* for Sept. 1863. If the seedling vine is a young one, it should have a fair chance before cutting it down. A careful examination of the flowers will show whether they are perfect or not. The figure given below shows a perfect grape flower expanded. The petals, which fall off as a little cap when the flower opens, are not shown. There is a bottle-shaped body in the center, surrounded by five threads with knobs upon the top of each. The central organ is the pistil, which will become the fruit, and those which surround it are the stamens, or fertilizing organs. If these are both present and in perfect condition, the vine should produce fruit unless some accident of the season or attacks of insects prevent. If either of these parts are lacking, or are badly developed and deformed, it is useless to expect fruit. The engraving shows the flower several times enlarged, but the natural ones can readily be judged of without difficulty, with or without a glass.



GRAPE FLOWER.

A Good Winter Pear—The Lawrence.

A good winter pear is a good thing. We have but few of them, and these ought to be better known. There are many which appear in the



LAWRENCE PEAR.

catalogues as winter pears of the first class, and they may be so in Europe, but here they are generally only late fall fruits, or if they keep, they ripen up indifferently. The Lawrence originated on Long Island, and has now been tested in widely different localities, and has proved a remarkably hardy and vigorous variety. Its leaves are thick, of a dark glossy green, and hang well on the tree, often remaining on after all other varieties have shed their foliage. It is a good and regular bearer; the size and shape of the fruit are given in the engraving. When ripe, the skin becomes lemon-yellow, with numerous brown dots. The flesh is juicy, very sweet, with a good flavor. When in perfection it is excellent. The fruit has fine keeping properties and will remain until mid-winter without shriveling. All pears should be well thinned, and this is especially necessary with the winter sorts, to secure their perfect development. Though the Lawrence has the reputation of ripening its fruit, even when badly grown, it is much better when thinned out.

What are Doucin and Paradise Stocks.

Several have written to know what these stocks, so extensively used for dwarfing apples, really are. For a number of years we have tried to get on the track of some definite information concerning them, and though we find the statement freely made that they are distinct species of apple, no one seems disposed to state what these species are. As we find that Carriere, of the Garden of Plants at Paris, with all his facilities for investigating the origin of these plants, has given it up in despair, we may conclude that it is unknown. They may possibly be accidental seedlings of a dwarfish habit which were introduced so long ago that their origin has been lost sight of. They are always propagated by layers, by stools, or by cuttings. The Doucin is the larger and more vigorous of the two, and has broader and more toothed leaves. Its fruit is broader than long, without ribs; the skin very deep green with a few

blotches of brown; the flesh of good flavor. The Paradise makes a bush with narrow and finely toothed leaves. The fruit is longer than broad, slightly ribbed, white and shining, and of a sweet and nearly flavorless quality. The flowers of the Paradise are more abundant than those of the Doucin, and appear a week earlier, and its fruit ripens a month sooner. The Doucin is the stock most generally employed in this country, the other being used only where very small dwarf trees are required for gardens.

Some Practical Hints about Pruning.

Though it is not advisable to cut large limbs during winter, there is much work which can be done with the knife. Indeed, in nurseries the cutting back of the young stock is mainly done in the winter season. Those who understand pruning require no instruction, but novices need to be told that there is a wrong as well as a right way to perform even so simple an operation as cutting back the growth of a young fruit tree. In fact, the early pruning of a young tree is of the greatest importance, as it determines its future shape. Works on horticulture direct to cut to an *outside* or an *inside* bud, if we would contract or open the head of the tree. Supposing we have a young tree and wish to cut back the growth of last season one half or one third: the way in which this is done will give a well or badly disposed growth the next season. Let fig. 1 represent two branches of such a tree. As will be seen, the buds, A, A, are on the inside, while those marked B, B, on the outside. It is the upper bud which, unless some accident occurs, will next season grow

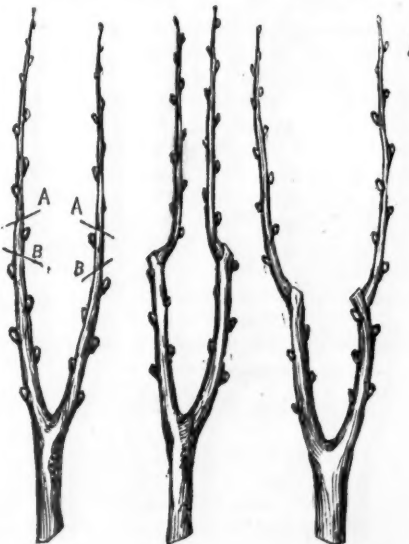


Fig. 1.

Fig. 2.

Fig. 3.

and lengthen the limb, and if the cutting be made at A, A, the appearance next autumn will be that shown in fig. 2. If, instead of this, we cut at B, B, a different shape will be produced, as in fig. 3. By observing this fact in pruning small limbs of all kinds, we have it in our power to control the shape of the tree or shrub.

At a Scotch church, a descendant of Nabal having put a crown piece into the plate, instead of a penny, and starting at its white and precious face, asked to have it back, was refused. In once, in forever. "Aweel, aweel," grunted he, "I'll get credit for it in heaven." "Na, na," said Jeems, the doorkeeper, "ye'll get credit only for the penny ye would ha' put in."



The Witch Hazel. — (*Hamamelis Virginica*.)

As we write, in November, the leaves are dead and fallen, the tender wild flowers have all gone, leaving only the Witch Hazel, which seems to defy the approach of winter. This shrub, singularly enough, comes into flower, and appears at its brightest at the very time when other plants are beginning their long rest. The shrub is usually rather irregular in form, grows from six to twenty feet high, and presents nothing very attractive until autumn, when just as its leaves have turned yellow and are about to fall, the stems are clothed with a profusion of light yellow flowers. The flowers usually appear in October and November and are produced in clusters of three or four upon a little stalk. The engraving is taken from a freshly gathered specimen, upon which a leaf still remains. The shape of the leaf is shown, also some of the flower clusters and the ripe fruit. A separate flower is seen at one side. Its most conspicuous parts are the four long, narrow petals; within these are eight stamens, only four of which are perfect and large enough to be seen. After flowering, the undeveloped fruit remains through the winter, perfects itself the next year,

and is ripe by the next flowering time. It is a two-horned seed pod, which when ripe, splits and throws out its two black, shining seeds with considerable force. The shrub is common along the borders of woods, and is worthy of a place in a collection of shrubbery on account of its peculiar season of flowering. It may be brought into tolerable shape by a free use of the knife. It propagates by layers and from seeds, or the plants may be transplanted from the woods. The application of the botanical name is not clear, but it is called Witch Hazel, probably for the reason that its twigs were used as divining rods by impostors professing to discover hidden springs of water.

Fighting Against Insects.

Not a few of the queries coming to the *American Agriculturist* are to ask the best way to destroy some particular insect. No questions are more difficult to answer than these, and the best we can do is to note down from time to time such remedies, and present such views as come to us well authenticated. An English gardener has recently found hot water the best remedy for the "American blight," as the woolly aphid is called in England. He syringes the tree with boiling water, which by the time it reaches the foliage probably becomes cool enough not to injure it, but still retains heat enough to destroy the insect. Rose bugs we thought incurable, except by killing and crushing; but a correspondent of the *Horticulturist* avers that he has kept them from his grape vines while in bloom by a free sprinkling of plaster (ground gypsum). It is easily and cheaply tried; our faith in it is not large, yet we hope it is effective. Dr. I. M. Ward, mulches his pear orchard with salt hay, which is put on in the spring after plowing. His pears are never attacked by curculio; he attributes his exemption to the use of the mulch. The fruit of his neighbors, who cultivate well, but do not mulch, is sadly infested. There is no doubt that the borer can be kept out of trees if cultivators will only take pains to use some of the various methods we have recommended from time to time. In confirmation of this we have a letter from Dr. J. B. Chapin, of Providence, R. I., who says: "Three years ago last Spring, I set fifty apple trees. The first year the borer destroyed three of them, and seriously injured a dozen more. The following April I dug down to where the roots branch off, and tied snugly about the trunk a strip of tarred paper—such as is used for roof covering—and wide enough to reach two or three inches above the surface, and then drew the soil back against it. I have not found a borer since. It is very inexpensive, easily applied, and appears completely effectual."

Insects on House Plants.

These are among the greatest obstacles to success in window gardening, but they are not insuperable. Let us take them one at a time:

The Red Spider.—A small fellow, and it needs a sharp eye to find him. But we may be sure he is on hand if the room is kept hot and dry, and the leaves turn yellow. To expel him, syringe the leaves above and below for several days. In desperate cases, put a little sulphur in the water. But water alone is generally effectual.

The Mealy Bug.—So called from its whiteness, and from the white web it often spins for itself at the axils of the leaves. It is a hydropathist, and will not budge for syringing. Pick off one

by one, or scrape off with a wire or stiff feather.

The Green Fly.—This is the commonest foe to house-plants, and happily can easily be got rid of. Tobacco smoke applied under and among the leaves will kill it. The smudge must be made under a barrel, box, or even a paper cap or tent, so as to retain the smoke among the leaves. Put a little tobacco in a pipe and light it, then fill the pipe with tobacco and blow through the stem. This will give off great volumes of smoke which may be directed under the covering of the plant. Do not blow the hot smoke on the leaves. A quicker and pleasant way is to dip the leaves in water heated to 125° or 130°. Be sure to test the water carefully with a thermometer; then place your hand over the ball of earth in the pot, and inverting it, hold the leaves under water about five seconds, or as long as it takes to count five slowly.



The Green Rose.

Every few years this comes up as a novelty. We saw a green rose at least 25 years ago, and can not tell how much longer it has been known in this country. The "*Flore des Serres*," the great horticultural journal of France, dates its appearance in 1855, but there is no reason why the same phenomenon might not have appeared in this country much earlier. It is simply a degenerate form of rose, with green leaves produced in the place of the petals or "rose leaves." It is well known to those who have paid any attention to vegetable structure, that a flower is only a branch with its leaves changed to serve a particular end. We have tried to explain this here and there, as much as would be proper in a journal of this character. The green rose, which from some accident or, so to speak, freak of the plant, is a flower which has stopped forming petals and gone to producing leaves instead, is a good illustration of the fact that the flowers and leaves are identical in nature if not in character. The engraving gives the appearance of this curious floral monstrosity.

A DOMESTIC PLATFORM.—One who has had considerable experience in the housekeeping line, says that a home should be supplied with such necessities as piety, pickles, pots and kettles, brushes, brooms, benevolence, bread, charity, cheese, faith, flour, affection, cider, sincerity, onions, integrity, vinegar, wine and wisdom. Have all these and happiness will be with you.

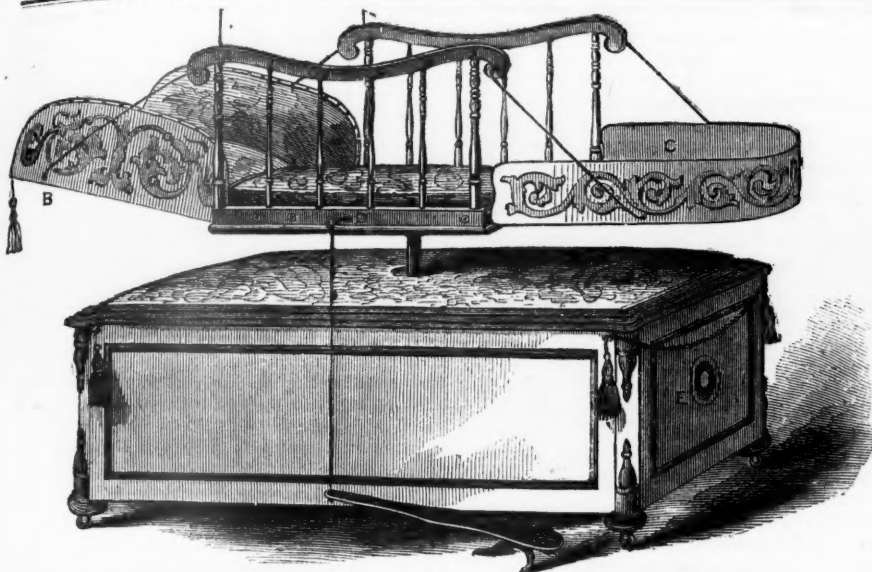


Fig. 1.—The Baby Tender as a Bed (D).—The head-rest, B, and the foot-piece, C, can be lowered, or elevated, or removed, as shown in the other figures. A Drawer with sunken knob, is seen at E. The foot-pedal, D, enables one to keep the bed in motion while sewing or reading. The bed may be revolved upon the standard, to turn the child's eyes from a strong light, and its head in any desired direction. The whole rests on castors, and is easily moved around the room. A curved wire, cut off from the top of the engraving to save space, can be inserted to support a mosquito or fly net above the child's face.

Tending the Baby.

As a rule, babies are "tended" too much. "Man is a bundle of habits," says the old adage, and these habits begin to be formed before he is two days old. Habits of eating and sleeping, are the first. A child may become habituated to lying for hours on its



Fig. 2, shows the head and foot elevated for an infant, bed, or on the floor; or, if indulged, it soon comes to exacting a place constantly in somebody's arms. Just as it is taught to do, it will either go to sleep when laid quietly in its bed, or it will require to be rocked to dizziness. When first laid down it cries, and the mother or nurse tries to soothe it by rocking in a cradle, or literally shaking it in her arms. Every time this is repeated, the habit is being formed or strengthened. Let it cry itself to sleep a few times, and the cries will daily grow less. Indulgence makes it more and more imperious and persistent; it soon learns if it can have its way by



Fig. 3, shows the head-rest elevated as a chair-back, with the foot-piece arranged as a toy-table—a Baby Jumper.

crying for it; and usually from the age of six to twelve or fifteen months, the spoiled baby is a very tyrant in the house. Its whims, rather its habits, must be attended to willingly and quickly, or you will soon be compelled to yield, in order to stop its noise. (Don't call us a 'cruel hearted, inexperienced man,' good mother, for we have a house full of little ones, almost as pretty and good as yours—not quite so, of course.) Human nature, or baby nature, is about the same the world over, though we have sometimes thought that the Indian babies, as we have seen them in the Western wilds, are rather better than those of white folks, for the former usually appeared perfectly contented and quiet, though lashed to a board and hung up all day



Fig. 4, shows the foot-piece removed, the head-piece elevated as a chair-back, and part of a small horse inserted in front to hold the child in. A towel or napkin may be tied across the top for a child too young to take care of itself. The feet rest upon the Ottoman, or on a foot-pad or stool on the top of it if needed. The chair is raised to any desired height by turning the ratchet. This form is specially useful for wheeling up to the table as a High chair or Baby-tender.

in the log cabin, (all the result of habit, of course.) But enough of sermonizing now; we said our say in the December *Agriculturist* last year, under the head of "Don't Rock the Baby," and will only repeat, that the best possible instrument for injuring babies, is the rocking cradle which throws them from side to side, reversing the natural flow of the blood, and producing stupor and enforced drowsiness or sleep. Yet in spite of all we may or can say, mothers will "tend" the babies constantly, and we will therefore describe for their benefit one of the new-fangled "helps" for the nursery.

Some time ago there came to our house, through the kindness of a friend, one of "Brown's Patent BABY TENDERS." We have tried it, the grown people at home have tried it, and the little folks keep trying it all the time. The unanimous decision is, that it is a good thing—handy, convenient, amusing, and all that, and that there ought to be one in every house where there is a baby. It is a sort of changeable affair—now an Ottoman

(fig. 5); now a Bed on springs (fig. 1); now a reclining Couch (fig. 2); now a Playing Chair (fig. 3); then a Baby Walker (fig. 6); then a High Chair for the table (fig. 4); then a Hobby Horse (fig. 7); and finally a "Nursery Chair" (a picture of which we omit because it did not look well in print.) There are two or three other forms of using the appa-

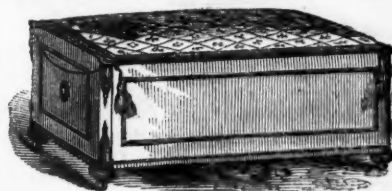


Fig. 5 shows the Baby Tender as an Ottoman or a seat

tus, but we have not room for more pictures. (Mr. J. T. Ellis, 939 Broadway, New York City, whomakes these Baby Tenders, will send a descriptive circular with full particulars, free of charge, to all who write to him for one.) The changes of form above noted are so simple and easily made, that our youngsters of six and eight years generally go through them all, (particularly fig. 7,) several times a day, and especially for the edification of their young friends when they call. In fact, to say



Fig. 6.—The BABY WALKER. A double horizontal shaft clasps the child's waist; it opens and is hooked together. It supports the weight at any height desired so that a child walks around the Ottoman, pushes it about the room, and learns to walk alone. We have found this one of the most useful modifications of the apparatus, for a babe ten months old.

nothing of its utility, it is the most amusing and entertaining plaything our little ones have lately found. We have been so well pleased with it, that we have had the accompanying engravings specially made for the readers of the *American Agriculturist*.—The vertical motion is more natural, and therefore preferable to the swinging of a cradle. One may jolt up and down, as on horseback, for a long time, and feel none of the dizziness experienced after a rapid motion of the head right and



Fig. 7, shows the Bed removed and a horse placed on the shaft for a child old enough to hold on. By turning the ratchet to let the feet just touch the Ottoman, the child can move up and down, or turn the horse around, at will.

left.—Fig. 8 (next page) gives an inside view of the Ottoman and the machinery, which is quite simple, and can hardly be got out of repair. The iron frame, B, E, has four hinges at the left, and swings freely, raising and lowering the shaft A, which

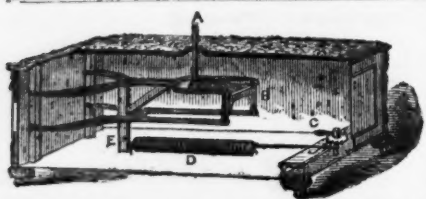


Fig. 8, is an inside view. See description in the text.

passes up through a hole in the cover. The coil spring, *D*, supports the frame at any desired height, and is adjusted to a heavy or light weight above, by turning the ratchet wheel at *C*, which is accessible by pulling out the drawer (*E*, Fig. 1.)

As will be seen by the engravings, all the apparatus can be taken apart readily; and nearly all but the horse can be packed into the Ottoman. This is 32 inches long, 18 inches wide, and 15 inches high. With the shaft lowered, it answers as a seat or Ottoman, (fig. 5,) and is therefore a convenient as well as neat piece of house furniture, with no cradle rockers projecting and always in the way. The pictures, with the explanations given, will readily show the utility of the apparatus. It is made in different styles, from very plain up to the highest finish, and varies in price from \$23 to \$100 or more, according to circumstances and taste of the purchaser. The different styles of finish are shown in the different figures; thus one in the style of fig. 4 is \$25; fig. 2 is \$30 to \$35; fig. 3 is \$42 to \$45; and so on.—The weight of the whole, packed up, is about 100 lbs. The horse (fig. 7) is \$4 to \$6 extra.

Household Notes for December.

"Molly Greenfield" contributes the following to the *American Agriculturist*: "Let every boy and girl have some regular work to do before and after school, and see that it is done well. Let it be the business of one to cut the wood, of another to bring it up, another to milk the cow, take care of the poultry, shovel the snow-paths; one daughter should wash the dishes, another sweep chambers, and when old enough, each take turn as mistress of the table, cooking, etc. Make them understand that only an extraordinary occurrence will excuse them from their daily duties. Do this for their sake as well as to aid in the work. Industrious habits are of great value. On the other hand, allow them ample time for play, lest they find home a dull place. Begin to eat the first meal before daylight, or adopt the two-meal-a-day system. A woman can do little else if she cooks three meals between daylight and dark, and the stomach has not time to digest one meal before another drops in. Avoid late suppers. For supper never eat warm bread, soups, or anything else not easily digested. The nightmare isn't always pleasant. Get the little ones to bed early, that they may form habits of early rising, and accustom them to obedience to the first call in the morning.... Good health and vigor are far more valuable than pleasing the eyes of vain people. Therefore do not send the little girls to school with thin stockings and short pantalets, or low-necked and short-sleeved dresses. Let their limbs be warmly clothed with thick flannel or knit under-drawers, woolen stockings, and stout calf-skin boots. Have a flannel wrapper for the chest, with long sleeves buttoning at the wrist, and,—please allow me to say it—do dispense with the hoops for these little ones until summer suggests them as a means of comfort. Do not house them too closely. Provide hoods, mittens, leggins, and overcoats, and let them have a chance to play out of doors, as well as the boys.... Make good use of the evenings. Do not allow the boys to roam in the street. Provide good society and entertainment for the children at home. If possible buy books of games, puzzles, dissected maps, a microscope, and drawing and painting materials. If practicable, get a chest of tools, or let the boys earn it in some way themselves. Let them exercise their ingenuity in making footstools, picture-frames, doll-cradles, sleds, rustic work, etc. The girls may make needle-books, vases, fancy worsted work,

shell and cone work, feather flowers—anything of the kind to interest them and make home the happiest place in the world. Be sure they have knitting work for spare moments; teach them that it is womanly to knit their own stockings, and a great privilege to present a little brother with a warm pair of socks or mittens. Let the boys learn to use the needle, and to knit too if they like. Let every boy and girl feel interested in making home pleasant and family friends comfortable. Encourage them also to spend an occasional evening for the soldier. Cultivate a taste for systematic reading and investigation. Give your child a book that he can read easily, and that will interest him; encourage him to read it thoroughly, and then to give an account of what he has learned. Give particular attention to History, Travels, and the Natural Sciences. Establish a family Post-Office, and let the different members write letters as from different parts of the world, with descriptions of scenery, employments, etc., gathered from reading. Drop in a letter yourself occasionally. Never let a child become weary of home, when there are so many ways of attaching him to it."

Make the Homestead Attractive.

It need not cost much money to adorn the place one lives in. Begin by digging out the briars and thistles of the door yard. Plant a few trees; then add several flowering shrubs. Perhaps that will answer for one year. Next year, make a gravel walk or two, and set a few flowering plants by their sides. Your wife and daughter will sow some flower seeds, if you will only prepare a neat border for them. Look at these few improvements, some bright morning next June, and we guarantee you will be glad you made them. And these labors, so rewarding, will lead on to others. The fences and buildings will be kept in repair. Trees will be set out along the roadside. The house will have window blinds, the rooms will be papered and painted; good furniture will be provided, and books and papers will not be missing. All these things will be regulated according to one's ability. And, as a general rule, whatever our means, it is better to make improvements by degrees, from year to year, than to do them all up at once, "by the job." Be assured this is the way to find the most happiness in home adorning. And, remember, the influence of such improvements does not end with the individual family. They tell silently, but with great effect, upon society. Every neighbor and every passer by feels them, and many are led by such examples to go themselves and do likewise.

Ask Your Wife.

"Oh! what do women know about business?" impatiently asks Mr. Crusty. Not as much as they ought, in many cases, and this is one reason for urging that they be consulted in matters affecting their husbands' interest. To say nothing of the aid which a wife's counsel and suggestions may give, it is unjust to keep her in ignorance of business. Want of a little knowledge of such matters renders many a widow an easy prey to sharpers, or at best greatly adds to her cares and perplexities. A woman needs to know the state of her husband's affairs in order to exercise proper economy in the household, avoiding what would be needless if his income were ample, or extravagance when his resources are diminished. The credit of thousands of merchants has been seriously impaired by the high style of living adopted by their families, who are foolishly kept ignorant of the real condition of their finances. On the other hand, we have known men caring more for money than for home comforts, who have studiously concealed their gains, and the wife and daughters have been forced in self defence to a hundred little deceptions by which to obtain even the decencies of life. Most of a man's thoughts must be upon his business plans, while he is achieving success; if his wife is not permitted to share his counsels, at least in a general way, she is necessarily shut out from

much of sympathy with him, and one of the great sources of happiness is thereby seriously diminished. And let not the lords of creation despise the counsels which woman's naturally quick perceptions may suggest: a well timed word from this source may at times be like the railroad switch to turn the train from running quickly to ruin.

About Cooking Oysters.

"Ostrea," from "Out West" writes: "Now can't the Editor of the *Agriculturist*, tell us something about oysters. Thanks to railroads, we get oysters here in the winter which look as good as those I have seen in your city, but they do not taste as good after they are cooked, and they shrivel all to nothing. Do they send different oysters here, or is there some secret in cooking them? They are not so very dear that one can not afford an occasional luxury."—Oysters in the city are, as far as we know, not different from those sent inland; the trouble everywhere is in cooking them too much.

For a "plain stew," put the oysters with their liquor into a saucepan, with a lump of butter, and pepper to taste; then just let them boil up once and they are done. Most people however like a little different stew: Put the oysters, liquor and all, into a saucepan, heat them gradually, and as soon as the "eyes," (as the round thick muscle is called) turn white, and the gills, or ruffled margin, appear stiff, skim them out and set in a dish in a warm place. Add to the liquor an equal quantity of milk (or more if you wish more broth), about a tablespoonful of finely powdered cracker for each quart of broth, a little pepper, and let the whole boil. Remove the scum which rises, add butter, return the oysters and let them remain just long enough to get warmed through again, but not to boil. A few bits of mace boiled in the liquor gives a flavor much relished by many persons. Oysters treated in this way will not shrivel.

For Fried Oysters, the largest should be chosen; drain them thoroughly upon a colander or sieve and it is all the better if they are dried with a towel. Powder a sufficient quantity of cracker by means of a rolling pin, and beat up an egg. Dip the oysters one by one in the egg and then in the powdered cracker, rolling them about to make as much as possible of the cracker adhere to them. If the oysters are small, two or three of them can be cemented together by means of the egg and cracker, so as to appear like one large oyster. Put the prepared oysters into a frying pan with a few lumps of butter here and there, cook over a brisk fire until of a light brown, then turn and do the other side in the same manner, and serve. There should be just butter enough to cook the oysters, but not have them swimming in it. They are much better in this way than when fried in a large quantity of lard.

Broiled Oysters are considered preferable to fried, and when well done they are perfection, in the oyster-line. Prepare the oysters as directed for frying, place them upon a wire gridiron, of the kind made for broiling fish and other purposes, having two halves hinged together which hold the oysters between them. The oysters, prepared as for frying, are to be broiled over a bed of lively coals until they are slightly browned, turning the gridiron so as to do both sides. Serve on a hot plate, with some melted not "drawn" butter poured over them,

Javelle Water.—This preparation under the French name of *Eau de Javelle*, is sold to a considerable extent in New-York City to laundresses who use it to bleach clothing and produce the extraordinary whiteness upon which they pride themselves. Its frequent use can not be commended, as it injures the fabric, but it is an exceedingly convenient article for the removal of fruit and all other vegetable stains from linen and other white clothes. It is readily and cheaply prepared, and will keep in a well closed bottle for any length of time. Mix half a pound of chloride of lime with half a gallon of water, in a deep jar. Add the water gradually, stirring with a stick so as to break up the lumps. Let it stand for a day or so, and then pour off the

clean liquid from the dregs. Dissolve a pound of pearlash in a quart of hot water and add this to the solution of chloride of lime; the mixture will be at first very milky, but will become clear upon standing, when it may be poured off and bottled for use. The stains may be wet with this preparation before the article is put into the wash.

Sugar Candy for Children.

Many persons condemn candy as an unhealthy article, and entirely prohibit its use by their children, while others supply it freely. When pure sugar is melted with a little water, and after cooking, is worked or "pulled" while cooling, to break up the regularity of the crystals, it assumes a soft, little texture and white, semi-transparent texture. It is therefore neither more nor less than pure sugar.—The fact that the taste for sweets is not an acquired one, but is natural from infancy, is of itself a strong indication that sugar or candy is not unwholesome, if taken at proper times and in due quantity. Sugar is similar in composition to starch, which makes up much the largest proportion of wheat flour and many other common articles of healthful food. To swallow bits of bread or cake at all times of the day, disturbs the digestion and is injurious to health, and the same is true of sugar, candy, fruit, or any other article requiring to be digested. Over-eating of bread or other solid food may produce indigestion, and large amounts of candy will produce the same effect. Sweet substances in the stomach, in greater quantity than can be readily digested, change to acids and thus produce heartburn or dyspepsia and derangement of the bowels. Food, and especially sweet substances, if left on or between the teeth, acidify and corrode them; hence sugar or candy taken at all times of the day will injure the teeth. But a moderate quantity of sugar, or pure sugar candy consumed at meal time, or at other times if not constantly or too frequently, can not be esteemed unhealthy, or injurious to the teeth. Some kinds of colored candy are as harmless as the white or transparent sorts; but as many of the coloring ingredients used are poisonous even in small quantities, the safest rule is, to entirely discard all colored candies. A little flavoring of peppermint, vanilla, wintergreen, cinnamon, etc., is not injurious.

To Make Good Mush, or "Hasty Pudding."

Corn meal rightly cooked, makes an excellent and cheap food. Mush and milk is a very good light supper for children or adults. Plenty of housekeepers know how to make hasty pudding. They bring the water to a boil, throw in a handful of salt, often too much or too little; then stir in the meal, frequently leaving large or small lumps in it, and in less than five minutes it is on the table. It is indeed hasty pudding, but not good pudding, and no wonder so few people like it, for thus made it has a raw, flat taste. The fact is, corn meal needs to be always cooked thoroughly. For good mush, salt the water just enough, allowing for cooking down; make the mush quite thin, stirring it until it is without the smallest remnant of a lump; then boil it down for at least 20 or 30 minutes, frequently stirring, and taking care that it be not scorched. Thus thoroughly cooked, it is palatable and relished either in milk, or fried after cooling and cutting into slices, when the slices are fried brown but not crisped, with just enough fat to keep from sticking to the griddle.

Mush Muffins.—Mr. A. B. Allen, to whom the country is indebted for the founding of the *American Agriculturist*, 23 years ago, often remembers us with practical hints. Here is one from him which he says is not original, but it makes such nice muffins that everybody should try it: "Make the mush the night before. In the morning add eggs at the rate of three to a quart of the mush; also 6 or 7 tablespoonfuls of flour, and 2 of lard."

For more Household Items, see "Basket."

BOYS & GIRLS' COLUMNS.

A Few Thoughts for December.

The year grows old. Snow sprinkles the northern hills, like the grey hairs which tell of advancing age, and the blasts sweeping among the bare trees remind us of the sighs of declining life. A few brief weeks, and 1864 will be known only among the records of the past.—No, that is not entirely true, for every year makes its mark on those which follow it. 1865 will bring fruit from seed both good and bad, sowed in previous time. The Boys and Girls of twenty, thirty, and forty years ago, are the present men and women, and the characters built up during that period make the world what it is now. Every child has this year, told in its own history, the future of help make the history of his own future and the future of the world. Now there are crimes, rebellions, wars and desolation, it will be because the boys and girls of to-day have learned and loved to do wrong rather than right. If, on the contrary, the children grow up truthful and virtuous, a few years will bring the world right. This may well cause serious thought. What has the year done for us and in us? We are constrained to ask ourselves, as we look over our pages "Which way has the *American Agriculturist* led its young readers this year?" Our endeavor has been to guide in the right course, and to make the path pleasant. Thousands of cheering letters from young and old show that we have not wholly failed in this, and we can not well fall while sustained by the love of so many strong friends. We may therefore confidently ask our young readers to help keep up and increase the number of the *Agriculturist* family. If father happens to forget that the time of subscription has expired, he will be pleasantly reminded of it by the request of a son or daughter for it another year. Now we wish you a MERRY CHRISTMAS in advance, and hope next month to salute you with A HAPPY NEW YEAR.

A Lively Plant.

No, we did not mean to say a live or living plant, but a lively one. Every fine day last summer, not far from the office of the *Agriculturist*, was a man with a number of pots of plants before him, calling out to the passers by: "Here they are, all lively—only 15 cents." Attracted by his cry and the sight of plants, we went to see what lively thing he was selling, and found it was our old friend the Sensitive Plant. This is a very curious plant, a native of Brazil, which grows a foot or more high, and has very finely divided leaves. The moment these leaves are touched, they fold up, the leaf stalk droops, and the plant appears as if dead. It is not dead, however, but only "playing possum," for if left to itself it gradually unfolds its leaves and is as lively as before. Our engraving below shows two leaves, rather less than the natural size, the lower one being open, and the upper one shut up and drooping as it appears after it has been touched. The plant of its own accord shuts up its leaves and goes to sleep toward sunset, and wakes up and spreads them in early morning. This folding of the leaves at night-fall is practised by many other plants, and there are a few others which move rapidly when touched, in a similar manner to the Sensitive Plant. All plants are alive as much as animals are, though some give stronger evidence of it than others; exactly what kind of life a plant has, we are not able to say. The Sensitive Plant will grow readily in the garden, and

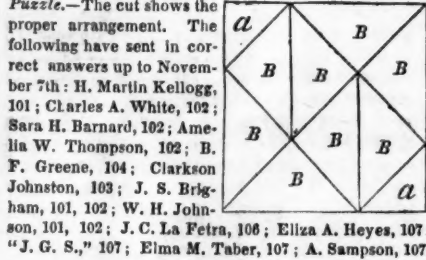


all the better if the soil be sandy. It is best to sow the seeds where the plants are to grow, as they do not bear moving well; or they can be sown in a pot. Almost all seed stores have the seeds at 5 or 10 cents a paper.

Answers to Problems and Puzzles.

The following are answers to the puzzles, etc., in the November number, page 322. No. 105: *Illustrated Proverb*. "Birds of a (one) feather flock together." One reader gave as the answer: "Misery loves Company."

No. 106.—*Card Puzzle*.—The card should be cut in the manner shown by the lines, in the accompanying engraving. This may be done most expeditiously thus: Fold the card together through the middle, as shown by the perpendicular line; then cut from near the two edges clear across through the folded side; next turn the paper over and cut from near the folded side across through the edges, and so on alternately, making narrow strips; finally open the card and cut down through the middle line, and the card may be stretched out to form a large ring.—No. 107.—*Figure Puzzle*.—The cut shows the proper arrangement. The following have sent in correct answers up to November 7th: H. Martin Kellogg, 101; Charles A. White, 102; Sara H. Barnard, 102; Amelia W. Thompson, 102; B. F. Greene, 104; Clarkson Johnston, 103; J. S. Brigham, 101, 102; W. H. Johnson, 101, 102; J. C. La Fetra, 106; Eliza A. Hayes, 107; "J. G. S.," 107; Elma M. Taber, 107; A. Sampson, 107.



New Puzzles to be Answered.

No. 108.—*Illustrated Rebus*.—Read it to your friends.



No. 109.—*Mathematical Puzzle*.—The ten letters represent the ten Arabic digits, E T S N P O L R A M 1, 2, 3, 4, etc. What value will you give to each letter so that this example of multiplication will be correct—each letter always having the same value. If the mathematicians of the *Agriculturist* family fail to solve this by calculation alone, a clue may be given to another method of finding the answer.

No. 110. *Historical Questions*.—Contributed to the *American Agriculturist* by "A. T." 1. What name was given to California in 1578? 2. By whom was it then named? 3. When in modern times, and where, was gold discovered in California? 4. From whom was Delaware named? 5. What European first discovered Florida, and what did he name it? 6. When and where was the first English settlement made in Michigan?

Boys and Girls Read Premium List.

Many articles are there offered which our young readers will find very desirable, and which they can obtain by a little perseverance, as many others have often done.



FIRST AND LAST STEPS. — Engraved for the American Agriculturist.

"From the cradle to the grave man needs assistance," said a celebrated writer. The artist has worked this thought into the above beautiful picture. The aged man totters along with the help of crutch and cane; the little one has the aid of a friendly hand in its first uncertain steps. Every hour of life, from its beginning to its end, illustrates this truth. Not a morsel of food, not a shred of clothing, nor a necessary thing or comfort, not a book, a game, nor any luxury or joy can we have, unless *some one* has helped to bring it. Even though all assistance from man be denied, there is yet the Loving Father who feeds the fowls of the air, clothes the lilies of the field, and cares for all his children. What a rebuke to selfishness is this. A child's first experiences are practical lessons in the law of love: he who will make this the rule of his life, will follow the footsteps of Him who has gone to prepare a place in Heaven for his children, and when this law is fully learned and heeded by all, the world will be what its Creator intended—a type of Heaven.

Now for that Wood Pile, Boys!

One of the most pleasant things we remember of our boyhood days, is the grand wood hauling and wood cutting "bee," we boys used to have, at the house of a poor widow who was struggling to support herself and her two children, one of them a cripple. Every December, some of the men would go to the forest with stout ox teams, and each bring a nice load of logs and leave them in her door-yard. Her house was near the school, and a lot of us would go over every noon-time and chop away at these logs until every one was cut and split fine. The little boys, too small to swing an ax, and the girls helped too. It was fine sport; it paid, boys, and it has been paying ever since. Suppose you try it. There is perhaps a soldier's wife or widow, or some other helpless woman in your neighborhood, or town. See what you can do for her. Make one snow fort less, while you gather at her door a pile of wood; or if wood be not used, contrive

some way to collect a good heap of coal. Perhaps some of the kind neighbors will fill your hand-sleds with coal if they know what you want to do with it. How many of the boys in our great *American Agriculturist* family will try this? Please let us hear from those who do so.

Fortunes of War—Singular Meeting.

A friend contributes to the *American Agriculturist* the following incident, which recently occurred in Brooklyn, N. Y. Several military gentlemen who had served during the present war, happened to meet and were recounting their experiences. One of them was formerly a Union citizen of Texas, but he had been forced into the rebel army, made prisoner, and afterward released on taking the oath of allegiance. He was asked "Where were you captured?" "At the battle of Spotsylvania, near the Court House," was the reply. "I was there," remarked a Colonel; "and I also," said a Captain; "and I too," said the third, a Lieutenant. The Texas gentleman continued: "During the battle, General Lee rode near us and asked 'What regiment is that?' and was told 'The —th Mississippi.' 'Just the one I want,' exclaimed Lee, and gave orders for them to retake an earthwork from which your Union forces had driven us, and had posted artillery. We started across an open field through a storm of death, arrived in a hollow in front of the work where we were sheltered from its fire, and formed ranks. There were only 267 men remaining. We carried the earthwork, but it availed little; for soon from your infantry, which must have been arranged in four lines of battle, came a perfect sheet of minie balls across the top of the parapet, cutting down every man who showed his head above it. A ball struck the bow of my spectacles, grazed my temple, carrying away a lock of hair, as you see (showing a small scar). A tree 22 inches in diameter, near which I stood, was literally chipped in two by the storm of balls, and fell, killing two men. Out of that 267 men only two besides myself escaped unharmed."

"I can corroborate your story" remarked the Colonel. I was in command of the infantry who made that attack, we were in four lines, and after the action I measured the stump of the tree you mentioned."—"When you were taken, did you not wear a haversack bearing a masonic emblem?" asked the Lieutenant. "Yes," was the reply. "And I am the man who made you prisoner," said the former speaker. "Your countenance seemed familiar, but I could not at once recall where we had met before."—Strange as tails; and it forms a most striking illustration of the curious chances of war.

"Little Things."

When Columbus was making his first voyage in search of the new world, as he drew near the shores of the unknown continent, the direction in which his vessel was sailing would have led him to the peninsula of Florida. One of his officers having noticed a flight of birds in a southwesterly course, prevailed on him to shift the helm and steer that way. This brought him to one of the West India Islands, and the Spanish colonies were founded there, instead of on the main land, which was kept for the more enlightened nations of England and France. Thus the history of the world was changed by a flight of birds. Many young readers of the *American Agriculturist* will be reminded of the declaration in the New Testament, "Not a sparrow shall fall on the ground without your Father."—In 1829, the Directors of the Liverpool and Manches-

ter railroad in England, offered a prize for the best locomotive engine. One built by a young Swede gave the greatest promise, but some part was broken during the first trial. He asked and obtained two weeks for repairs. Again his engine seemed the most successful, but unfortunately (he thought) some weak part gave way. He asked one day more, which was refused; the engine built by George Stephenson took the prize, and was at once adopted on the railways of England. The Swede, discouraged by his ill success in England, came to America, made many inventions, and finally built the first iron clad vessel, the celebrated Monitor, which, as all know, beat off the monster Merrimac, and perhaps saved a large part of our shipping on the Atlantic coast. This event has made the name of Ericsson a household word, revolutionized naval warfare, and largely aided in preventing intervention by England in our national struggle.

Let Boys and Girls Learn to Give.

We know a gentleman who gives away a large share of his income, though so many of his donations are to distant objects and in so private a way, that no one knows how much he gives every year. In a speech in behalf of a good object, he urged parents to teach their children to give, and stated that when a boy, his parents always divided among the children every donation to the Missionary Societies, etc., so that each one became accustomed to give something to good objects. They were poor, but managed to give a few pennies to every benevolent enterprise. The habit thus formed had grown with his years, and had given him a world of pleasure. Let every boy and girl acquire this good habit; and it is well for them to learn to give something that they have themselves earned, or saved by their own efforts. It is more blessed to give than to receive. The kind hearted benevolent man or woman is always the happy one. We hope the young readers of the *American Agriculturist* will early learn this way of securing happiness.

Wheeler and Wilson's Industrial Palace.

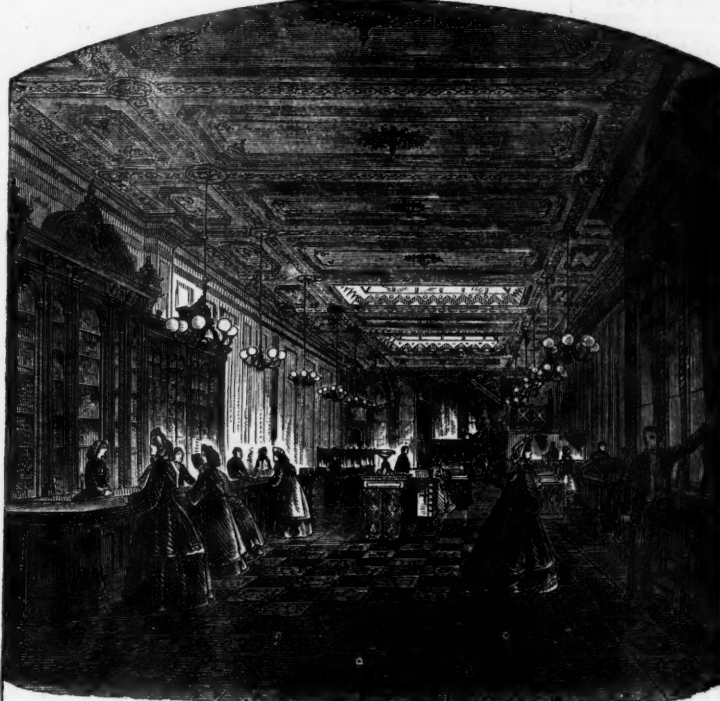
The mournful melody of "The Song of the Shirt" is lost in the cheerful music of the Sewing Machine. Common needle-work has become artistic, living in beauty with the lines of the pictorial art. The artist and the artisan clasp hands. Especially is this seen in the palaces of industry with which the city abounds. Our merchant and mechanic princes have honored labor, and the city and country by palatial warehouses and private residences, but it has been left to almost the youngest branch of American industry to contribute the crowning grace. The WHEELER & WILSON SEWING MACHINE COMPANY has purchased the Art Institute Building, No. 625 Broadway, noted as presenting the most picturesque front on that world-famed street, and matched the excellence of their machines by the finest salesroom in the world. This Company occupies the first floor and part of the second, with the two basements, while the Picture Gallery and the Studio remain above; and everything has been done that artistic taste and mechanical skill could do to beautify and utilize it. Entering the front door, a vista of 150 feet in length and of proportionate width is swept by the eye, in which is embraced a rare display of cabinet work, carpeting, glazing, furniture, gas fixtures, and articles of *virtu*, the whole evincing the most careful study. The wood work—cases, desks, counter, stair case—is all of black walnut, oil or wax finished, and ornamented with fine carving and ebony moulding.

Passing the large show windows, to the right is a show case and to the left a thread case and counter fifty feet long, and farther back on either side are several desks, surmounted with galleries of heavy French plate glass. We have never seen more rich and elegant fixtures. The excellence of the material is suited to the work, and the ebony moulding contrasts tastefully with the lighter black walnut. The frescoing of the ceiling is in panels of the soft tint of the tea rose, with intricate corner scrolls of scarlet and violet. The frame work of deep blue pales to violet, which, in turn is lost in the most delicate primrose. Here and there lies a tinge or line of gold, lending light and relief to the mass of blending hues. The cornice is white, blue, and gold. The walls are in panels of pearl and primrose, pencilled with violet, while between each rises a broad plaster of ultramarine wrought at intervals with gliding. The carpet, in squares of blue, crimson, and pearl color, with wreaths of veined oak leaves, admirably matches the frescoing. By day this room has the additional light of two large arched sky-lights of frosted glass, figured with artistic symbols, and in the evening is lighted by thirteen bronze and gold chandeliers and reflectors, and by a mellow light through the sky-lights from the gallery above. At the end of the room are the office and the staircase leading to the upper instruction room. The elegant frame-work of this office is filled with panels of frosted glass, beautifully figured with wreaths, scrolls, and artistic devices, into which is introduced the Monogram of the Company, W. W. To those in the doors are added a view of the Company's Manufactory at Bridgeport; also, an elegant representation of the Sewing Machine, with Genius crowning the invention. The carpet of this office is of emerald velvet, strewn with bouquets of roses, and the furniture of black walnut, upholstered in green reps. Under the staircase are several small rooms for various purposes. In the rear is a fine instruction room, finished in light oak. The staircase leading to the upper instruction room is

one of the finest in the world, whether in palace or in private residence. The style is purely Elizabethan, richly carved, and lighted by figured glass panels. The newel posts are very elaborate and surmounted by carved columns with gas globes. To the right of the ascent is Crawford's exquisite statue, "Dancing Jenny," and at

cessfully has he employed them. The arched ceiling is a *chef d'œuvre*—a gorgeous canopy of brilliant coloring athwart which glance a hundred rare lights and shades. The style of frescoing is purely Romanesque, and its classic beauties challenge comparison with those of Pompeii and the Vatican. A cornice of blue, threaded with white, frames this fair picture. In the four corners lie exquisite medallions of the Goddesses of Justice, Industry, Wisdom, and Prudence. A softened radiance fills the room through the lofty sky-light of figured glass, lingering upon four Raphaellesque cherubs painted within the arch—angels smiling upon the fair humanity flitting beneath. The walls are in arched panels of French gray, the neutral tint serving to throw out and enhance the radiance of the ceiling. The sound of footfalls is lost in the softest of Persian carpets, blending in its wool rich gold and crimson dyes. There is no need of study to discover the beautiful here—the air at its portals is fraught with its spirit, and within, it grows upon you with every moment. To love the beautiful is part of the feminine nature; to associate and to be associated with it, even in the common routine of daily life, is one of woman's fairest dreams. In this industrial *salon* assemble, daily, ladies of the highest social position, for instruction in using the sewing machine. And it is noteworthy that in this establishment is now sold for \$50, a better machine than could be bought a few years since for \$100. The two basements, each 230 feet in length by 32 in width, are used for adjusting, packing and shipping. In no case has the useful been sacrificed to the beautiful, and in all parts of the premises the most careful attention

has been given to the uses thereof. The minutest particulars as well as the *tout ensemble* are worthy the study of *connoisseurs* and practical men.—*Home Journal*. We have from time to time chronicled the development of the Wheeler & Wilson Sewing Machine, until it has become of prime importance. It is now no longer an experiment to be tried, but a success achieved, with results far exceeding the most sanguine expectations. The "novelty" of ten years since has become a "necessity." So fully has it commended itself to public favor, that it is looked upon as indispensable in every department of industry requiring sewing, and the appointments of a well-ordered household are incomplete without the Sewing Machine. Not only are the wants of the housekeeper fully met, but they are found a necessity for the seamstress, dressmaker, tailor, manufacturers of shirts, collars, cloaks, mantillas, clothing, hats, caps, corsets, ladies' boots, silk and linen goods, umbrellas, parasols, &c. Some of these branches have attained gigantic proportions, and it is not unusual to find from one hundred to four hundred Sewing Machines used in a single manufactory. Their advantages were most signally demonstrated in our military emergencies. Regiments, brigades, armies, were clothed at short notice. Indeed, the entire feminine force of the country, unaided by machinery, would have been unequal to the exigency. One woman alone has cut out, and her employees stitched 500,000 cartridge bags. This is not surprising when the efficiency of the machine is considered. Seams of considerable length are ordinarily sewed at the rate of a yard a minute, and that, too, in a manner far superior to hand sewing. Garments are now made entirely by it, with the exception of sewing on buttons and the like. Laces are stitched on; folds, tucks, gathers, and plaits are laid and stitched; cord run in, binding put on, quilting done after elaborate and beautiful designs. This Company will soon put a machine into market, capable of stitching 1000 button holes per day.



PERSPECTIVE OF SALESROOM.

the left the "Fairy Sewing Machine," the gem of sewing machinery. The direct ascent is six steps to a platform facing a large mirror, which gives a striking duplication of the salesroom; thence to the right ten steps to another platform, from which there is the finest view of

the room below and the frescoed ceiling above. To the left then twelve more steps bring us to the *charmed* precincts of the upper instruction room. Here is the crowning beauty. Its form and size afforded the architect the proper conditions for the display of taste, and most suc-



THE UPPER INSTRUCTION ROOM.

cessfully has he employed them. The arched ceiling is a *chef d'œuvre*—a gorgeous canopy of brilliant coloring athwart which glance a hundred rare lights and shades. The style of frescoing is purely Romanesque, and its classic beauties challenge comparison with those of Pompeii and the Vatican. A cornice of blue, threaded with white, frames this fair picture. In the four corners lie exquisite medallions of the Goddesses of Justice, Industry, Wisdom, and Prudence. A softened radiance fills the room through the lofty sky-light of figured glass, lingering upon four Raphaellesque cherubs painted within the arch—angels smiling upon the fair humanity flitting beneath. The walls are in arched panels of French gray, the neutral tint serving to throw out and enhance the radiance of the ceiling. The sound of footfalls is lost in the softest of Persian carpets, blending in its wool rich gold and crimson dyes. There is no need of study to discover the beautiful here—the air at its portals is fraught with its spirit, and within, it grows upon you with every moment. To love the beautiful is part of the feminine nature; to associate and to be associated with it, even in the common routine of daily life, is one of woman's fairest dreams. In this industrial *salon* assemble, daily, ladies of the highest social position, for instruction in using the sewing machine. And it is noteworthy that in this establishment is now sold for \$50, a better machine than could be bought a few years since for \$100. The two basements, each 230 feet in length by 32 in width, are used for adjusting, packing and shipping. In no case has the useful been sacrificed to the beautiful, and in all parts of the premises the most careful attention

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Advertisements.

Advertisements, to be sure of insertion, must be received **BEFORE** the 10th of the preceding month.

N. B.—No Advertisement of Patent Medicines or secret remedies desired. Parties unknown to the Editors personally or by reputation, are requested to furnish good references. We desire to be sure that advertisers will do what they promise to do. By living up to these requirements, we aim to make the advertising pages valuable not only to the readers, but to the advertisers themselves.

TERMS—(cash before insertion):

One Dollar per line, (14 lines in an inch), for each insertion.
One half column (74 lines), \$65 each insertion.
One whole column (148 lines), \$130 each insertion.
Business Notices, One Dollar and a Quarter per line.

Improved Wood Sawing Machine.

AND

HORSE POWER,

MANUFACTURED BY

THE CLARK SORGO MACHINE CO.,
CINCINNATI, OHIO.

This is the most complete

Cross Cut Sawing Machine

in the market. It has been thoroughly tested and has taken the **First Premium** at the leading State Fairs. It is **simple, durable and light**, easily handled by two men.

It will cut from 15 to 30 cords of wood per day. A band wheel can be furnished for running other light machinery. **All Machines fully WARRANTED.**
Send for Circulars giving full descriptions.

Patent Excelsior Weather Strip.

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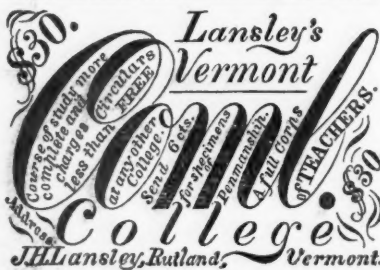
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Messrs. Mallory and Sanford:

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Truly yours, **R. R. CALKINS.**

HAMILTON, O., March 24th, 1864.

Messrs. Mallory and Sanford:

GENTS.—I have been using your Patent Brake for the past four months, and am well pleased with, and do not hesitate to recommend it to all parties, wishing to buy such an article, as the best I have yet seen in use.
Yours Respectfully, **LOUIS SNIDER.**

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Yours truly,
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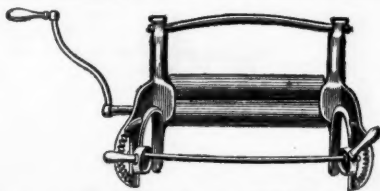
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